

REPORTS, RETURNS AND STATISTICS  
OF THE  
INLAND REVENUES

OF THE  
DOMINION OF CANADA

FOR THE FISCAL YEAR ENDED MARCH 31

1912

PART III  
ADULTERATION OF FOOD

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA

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EXCELLENT MAJESTY

1912







# CONTENTS

	PAGE.
Deputy Minister's Report.....	3
Chief Analyst's Report.....	5
Appendix A—Inspection of Black Antimony.....	7
"    B        "    Canned Corn.....	16
"    C        "    Fertilizer.....	29
"    D        "    A Study of Maple Syrup.....	52
"    E        "    Olive Oil.....	90
"    F        "    Headache Powders.....	104
"    G        "    Stock Feeds, Bran, Plants and Chop Feed.....	176
"    H        "    Cocacola.....	216
"    I        "    Marmalades.....	224
"    J        "    Sweet Spirit of Nitre.....	248
"    K        "    Vinegars.....	258
"    L        "    Ground Ginger.....	288







REPORT  
OF THE  
DEPUTY MINISTER OF INLAND REVENUE

To the Hon. W. B. Nantel,  
Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a statement showing the work done by the Chief Analyst and staff at Ottawa for the year ending March 31, 1912.

Description.	Genuine.	Doubtful.	Adulterated	Sold as Compound.	Total.
Black Antimony.....	39	17	21	0	77
Canned Corn.....	146	0	0	0	146
Fertilizers.....	137	20	*4	0	161
Olive Oil .....	139	0	13	0	152
Bran, Shorts, Chop Feed.....	262	21	14	†1	298
Marmalades.....	138	‡2	§14	0	154
Sweet Spirit of Nitre.....	42	0	32	0	74
Vinegars.....	151	0	0	0	151
Ground Ginger.....	127	10	14	.....	151
A study of Maple Syrup.....	.....	.....	.....	.....	1364
Headache Powders.....	.....	.....	.....	.....	456
Coca-Cola.....	.....	.....	.....	.....	300
					68
					2188

\* Not registered.    † Cotton Seed Meal.    ‡ Destroyed.    § Contain Glucose.

Since my report of last fiscal year much work has been done in connection with the legalizing of further standards for food products and it is hoped that, at an



3 GEORGE V., A. 1913

early date, the data secured will be sufficient to enable the Department to recommend the fixing of standards therefor. The Chief Analyst, in his report, refers to the classes of food in connection with which further investigation has been made.

The standards already established cover Milk and its products ; Grain products, Meat and meat products, Beverages, Maple Sugar and Maple Syrup.

I have the honour to be, Sir,

Your obedient servant,

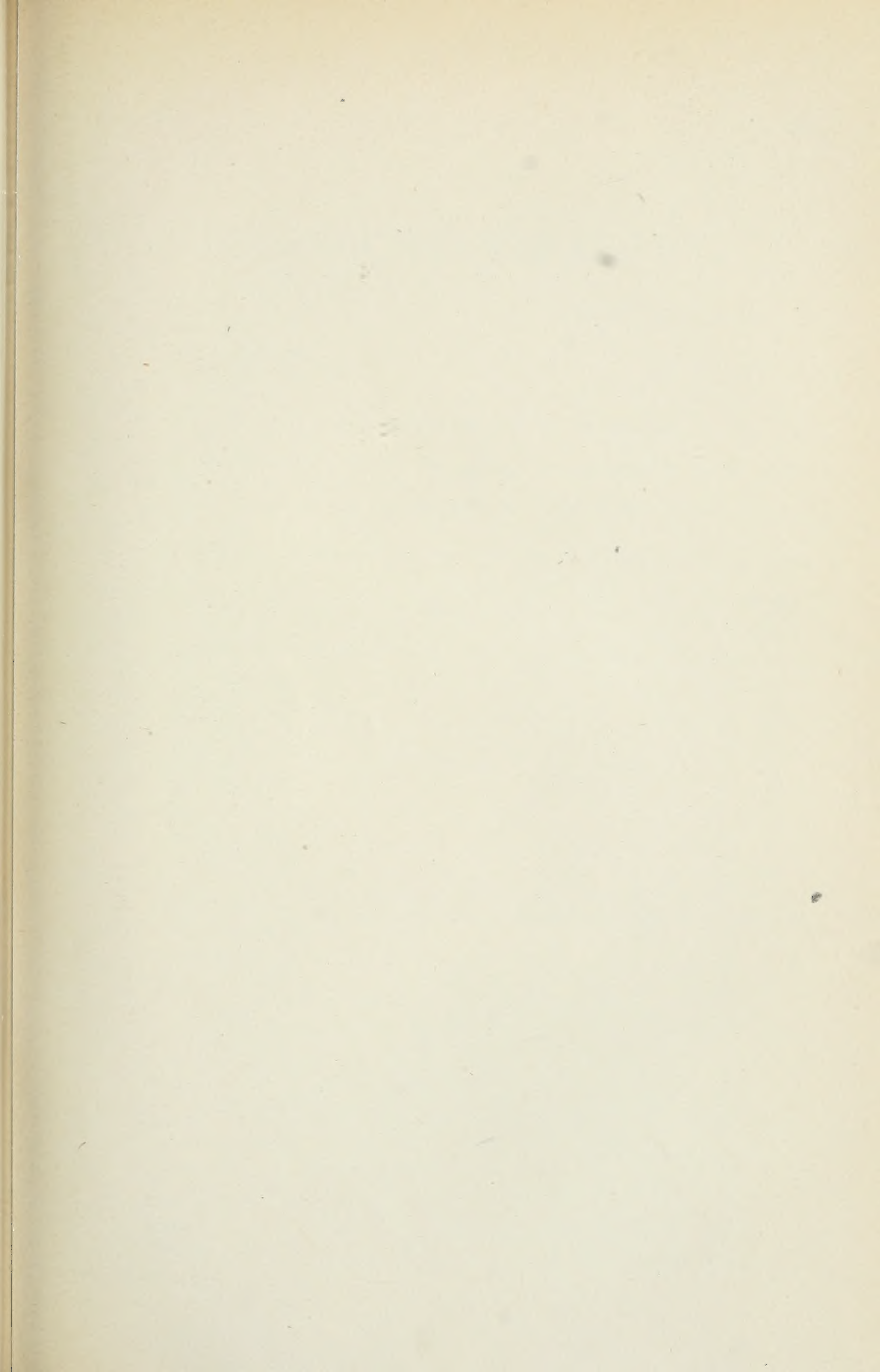
W. J. GERALD,

*Deputy Minister.*

INLAND REVENUE DEPARTMENT,

OTTAWA, August 21, 1912.











REPORT OF THE CHIEF ANALYST.

OTTAWA, August 15, 1912.

W. J. GERALD, Esq.,  
Deputy Minister,  
Inland Revenue Dept.,  
Ottawa.

SIR,—I beg to report as follows upon the work of this laboratory for the fiscal year ending March 31, 1912.

During this period 2,188 samples were collected by our inspectors in the regular way, and are recorded in this report.

The results of analysis are detailed in Bulletins 225 to 236, both inclusive, as follows:—

Number of Bulletin.	Subject.	Number of Samples.
225	Black Antimony.....	77
226	Canned Corn.....	146
227	Fertilizers, 1911.....	161
228	Maple Syrup.....	456
229	Olive Oil .....	152
230	Headache Powders.....	300
231	Stock Feed.....	298
232	Coca-Cola (Syrup) .....	68
233	Marmalades.....	154
234	Sweet Spirit of Nitre .....	74
235	Vinegars.....	151
236	Ground Ginger.....	151
		2188

In addition to the above, there have been performed the following occasional analysis during the year:—

Acetic Acid.....	46
Beer.....	24
Butter.....	11
Burnt Alum.....	1
Bonbons.....	1
Brandy.....	1
Cream.....	7
Cotton seed meal.....	1
Cheese.....	1
Cubeb cigarettes.....	1
Celery salt.....	1
Cream of Tartar.....	4
Corned beef.....	1
Corn.....	24
Coal oil.....	1



3 GEORGE V., A. 1913

Chicken feed...	1
Cinnamon bark...	1
Essences...	7
Fusel oil...	7
Flour...	2
Fertilizers...	22
Froufrou biscuits...	3
Flannel...	3
Fullers earth...	4
Gopher poison...	1
Hop tonic...	1
Honey...	4
Jam...	3
Lead arsenate...	2
Linseed oil...	5
Lard...	36
Lime juice...	1
Licorice...	1
Maple syrup...	15
Maple sugar...	4
Malt extract...	1
Milk...	24
Molasses...	3
Malt...	1
Pepper...	7
Paint material...	7
Porter...	2
Stock feed...	2
Scotch whiskey...	1
Spirits...	2
Sugar...	3
Turpentine...	3
Tea...	1
Vinegars...	56
Vinegars. (Excise)...	449
Vin Mariani...	1
Water...	38
White lead...	1
Wine...	2
<hr/>	
	852
Samples collected by our inspectors...	2188
Occasional samples...	852
<hr/>	
	3040

The total number of analyses made is, therefore, 3,040.

The following solutions have been prepared and supplied for the use of excise officers, in vinegar testing:—

Normal soda... 81 winchesters.

Standard Phenolphthalein... 15 bottles.

Normal Sulphuric Acid... 3 "

Although no new Standards for Foods have been put in force during the year, much important work has been done towards the completion of Standards, especially for the following classes of food:—Spices (Pepper, Cloves, Mustard, Ginger), Flavor-



## SESSIONAL PAPER No. 14

ing Extracts (Lemon, Vanilla), Baking Powders, Cream of Tartar, Lime Juice, Acetic Acid, Canned Tomatoes, Table Salt, Vinegar, Oysters and Olive Oil; Linseed Oil and Turpentine have also been studied with a view to their legal definition.

The published work of these laboratories is contained in Bulletins 225 to 236, which are attached to this report.

All that is necessary to be said in connection with this work is stated in the introductory letter prefacing each bulletin.

Special attention should be called to Bulletin No. 228, which contains a study of Maple Syrup. Consequent upon this extended research it has been found necessary to make slight alterations in the standards established for Maple Syrups and Sugars, as in force from April 25, 1911 (G. 961).

The revised standards (published as Circular G. 994), are appended to this report.

Bulletin No. 230, dealing with Headache Powders, owes its definiteness to the Patent or Proprietary Medicine Act, under which it has been found possible to set limits, to the amount of certain drugs, which may be present in remedies of the kind without notification of the fact upon the label.

The total number of samples analysed during the year is much smaller than in previous years. This is partly due to the nature of the work, and partly to the existence of two vacancies on the staff, which it is hoped will shortly be filled.

In order to secure trustworthy data for an opinion as to the character of foods and drugs, as these appear in the markets of Canada, it is necessary that at least from 5,000 to 10,000 samples should be examined annually.

It is particularly necessary that articles sold in broken packages or in bulk, should be examined in large numbers, as these offer greatest facilities for adulteration.

It is to be remembered, however, that, while the greatest part of our work in connection with the administration of the Adulteration Act, is of a police or inspectorial character, a very considerable part of it has had special regard to the securing of data for the fixation of standards; and this necessarily involves much greater expenditure of time and labour.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



3 GEORGE V., A. 1913

DEPARTMENT OF INLAND REVENUE,  
OTTAWA, March 22, 1911.

**MEMORANDUM.**

Under the authority of an Order of His Excellency in Council bearing date the 20th instant, and in virtue of the provisions of the twenty-sixth section of the 'Adulteration Act,' the following standards of quality have been established for 'Maple Sugar and Maple Syrup':—

**MAPLE SUGAR.**

Maple Sugar is the solid product resulting from the evaporation of maple sap, or of maple syrup, and contains not more than ten (10) per cent of water. It yields not less than five-tenths (0.5) of one per cent of ash, reckoned on the dry matter of the sugar. It yields not less than four-tenths (0.4) of one per cent of malic acid, reckoned on the dry matter, when worked by the method No. 1, described below; not less than two and two-tenths (2.2) as *Lead Subacetate Number*, when worked as described under method 2, below.

*Method No. 1.*—Six and seven-tenths grammes of the sample is weighed into a 200cc. beaker and water added to make a volume of 20cc. The solution is made slightly alkaline with ammonia, 1cc. of a ten per cent solution of calcium chloride is added; then 60cc. of 95 per cent alcohol. The beaker is covered with a watch glass and heated for one-half hour on a water bath, when the flame is turned off and the beaker left to stand over night. The material in the beaker is then filtered through a good quality filter paper, the precipitate washed with hot 75 per cent alcohol to freedom from soluble calcium salt, dried and ignited. From 15 to 20 cc. of tenth normal hydrochloric acid is added to the ignited residue, the lime thoroughly dissolved by careful boiling, and the excess of acid titrated with tenth normal sodium hydroxide, using methyl orange as an indicator. One-tenth of the number of cubic centimeters of acid neutralized express the result, which for the present will be called 'Malic Acid Value.'

*Method No. 2.*—Five grammes (5) of sugar is dissolved in water, to a volume of 20cc. Two (2) ccs. of a solution of subacetate of lead is added, and the solutions thoroughly mixed. After standing for two (2) hours, the precipitate is filtered off, using a Grooch crucible or a sugar tube packed with asbestos, and washed four or five times with hot water, using the suction pump, dried and weighed. The weight of the dry precipitate in grammes is multiplied by 22.22. The product is the *Lead Subacetate Number*.

Mode of preparation of Solution of Subacetate of Lead, as follows:—

Boil for half an hour 430 grammes of normal lead acetate and 130 grammes of litharge with 1000cc. water. Cool the mixture, allow to settle, and dilute the supernatant liquid to 1.26 specific gravity.

Maple Syrup is syrup made by the evaporation of maple sap, or by the solution of maple concrete in water; and contains not more than thirty-five (35) per cent of water. The ash and *Lead Subacetate Number* expressed as percentages on the syrup when multiplied by  $\frac{100}{65}$  must be equal to the corresponding standard for maple sugar.

NOTE.—In determining the Lead Subacetate Number of maple syrup, the solution of five (5) grammes of syrup in water must be boiled to expel carbon dioxide, which might be present as a fermentation product, and the boiled and cooled liquid made up to 20 cbc. The weight of the lead precipitate found may be multiplied by 30.77 to give the 'Lead Subacetate Number,' which must be not less than 2.2.

The standards above defined take effect on the 25th day of April prox.

W. J. GERALD,  
Deputy Minister.



## SESSIONAL PAPER No. 14

DEPARTMENT OF INLAND REVENUE,  
OTTAWA, November 8th, 1911.

## MEMORANDUM.

Under the authority of an Order of His Royal Highness, in Council, bearing date the twenty-seventh day of October last, the Order in Council of the 20th March, 1911, establishing standards, under the provisions of the twenty-sixth section of the Adulteration Act for Maple Sugar and Maple Syrup, is repealed, and the following standards are now established:—

## MAPLE SUGAR.

Maple Sugar is the solid product resulting from the evaporation of maple sap, or of maple syrup, and contains not more than ten (10) per cent of water. It yields not less than six-tenths (0.6) of one per cent of ash, reckoned on the dry matter of the sugar when incinerated in such a way as to assure the earths being present as salts and not as oxides, and not less than twelve one-hundredths (0.12) of one per cent of ash, insoluble in water, employed as described below. It yields not less than three-tenths (0.3) per cent of malic acid, reckoned on the dry matter, when worked as described below. It yields a *lead number* not less than one and seven-tenths (1.7) when worked by the Canadian method, nor less than one and two-tenths (1.2) when worked by the Winton method, as described below.

## MAPLE SYRUP.

Maple Syrup is syrup made by the evaporation of maple sap, or by the solution of maple concrete in water, and contains not more than thirty-five (35) per cent of water. The dry substance of maple syrup shall meet all the above standards for maple sugar.

*Methods of Working.*

Water in maple sugar shall be determined by heating to 100° C. five (5) grammes of the finely powdered sugar, spread upon a watch glass, to constant weight. The loss of weight shall be reckoned as water.

Water in maple syrup shall be determined by drying five (5) grammes of the syrup, on asbestos fibre or in admixture with sand, to constant weight, at a temperature not exceeding 100° C. The loss of weight shall be reckoned as water.

Total Ash in both maple sugar and maple syrup shall be determined by gentle ignition of five (5) grammes in platinum, to the point of incipient charring, after which, ignition to constant weight shall be completed in a muffle, at as low a temperature as possible. The resultant ash is then treated with ammonium carbonate in solution, dried and gently ignited, when the weight should remain unchanged.

Insoluble Ash is determined by treating the total ash with 40 cc. of hot water, and gently boiling for two minutes. The contents of the dish are then thrown upon a small, ashless filter, and washed with hot water till the total filtrate amounts to 100 cc.

Malic Acid.—Six and seven-tenths (6.7) grammes of the dry sugar, or its equivalent amount in syrup, is weighed into a 200 cc. beaker and water added to make a volume of 20 cc. The solution is made slightly alkaline with ammonia, 1 cc. of a ten per cent solution of calcium chloride is added, then 60 cc. of 95 per cent alcohol. The beaker is covered with a watch glass and heated for one half-hour on a water bath, when the flame is turned off and the beaker left to stand over night. The material in the beaker is then filtered through a good quality filter paper, the precipitate washed with hot 75 per cent alcohol to freedom from soluble calcium salt, dried and ignited. From 15 to 20 cc. of tenth normal hydrochloric acid is added to the



3 GEORGE V., A. 1913

ignited residue, the lime thoroughly dissolved by careful boiling, and the excess of acid titrated with tenth normal sodium hydroxide, using methyl orange as an indicator. One-tenth of the number of cubic centimeters of acid neutralized express the result, which for the present will be called 'Malic Acid Value.'

## LEAD NUMBER—CANADIAN METHOD.

Five (5) grammes of the dry sugar, or its equivalent in syrup, is dissolved in water, to a volume of 20 cc. Two (2) cc's of a solution of sub-acetate of lead is added, and the solutions thoroughly mixed. After standing for two hours, the precipitate is filtered off, using a Gooch crucible or a sugar tube packed with asbestos, and washed four or five times with hot water, using the suction pump, dried and weighed. The weight of the dry precipitate in grammes is multiplied by 20. The product is the *Lead Subacetate Number*.

Mode of preparation of solution of Subacetate of Lead is as follows:—

*Boil for half an hour 430 grammes of normal lead acetate and 130 grammes of lithage with 1000 cc. water. Cool the mixture, allow to settle, and dilute the supernatant liquid to 1.26 specific gravity.*

## WINTON METHOD.

Twenty-five (25) grammes of dry sugar, or its equivalent in syrup, is transferred to a 100 cc. flask with water. Add 25 cc. of the standard lead acetate solution and shake; fill to the mark, shake and allow to stand at least three hours before filtering. From the clear filtrate, pipette off 10 cc. to a 250 cc. beaker, add 40 cc. of water and 1 cc. of concentrated sulphuric acid; shake and add 100 cc. of 95 per cent alcohol. Let stand over night, filter on a tared Gooch crucible, wash with 95 per cent alcohol, dry in a water oven and ignite over a Bunsen burner, applying the heat gradually at first. Cool and weigh. Subtract the increase in weight of lead sulphate from the weight of the blank. Multiply the difference by the factor 27.325. The determination of the blank is made as follows:—

Transfer 25 cc. of the standard lead acetate solution to a 100 cc. flask, add a few drops of acetic acid and make up the whole to the mark with water. Shake and use 10 cc. for the determination of lead, as directed in the preceding section.

NOTE 1.—If the maple syrup samples have undergone fermentation in any degree, the carbonic acid must be boiled off before adding the lead acetate solution. This with either of the above methods.

2. If crystallization of sugar has taken place in maple syrup samples, this must be redissolved by gently warming the sample before proceeding with the analysis.

The standards above defined take effect on the 27th instant.

W. J. GERALD.

*Deputy Minister.*

The Honourable

The Minister of Inland Revenue.

## MEMO.

The standard lead acetate solution for Winton method is made by diluting one volume of the solution of sub-acetate of lead with four (4) volumes of water and filtering.



## APPENDIX A.

## BULLETIN No. 225—BLACK ANTIMONY.

OTTAWA, July 18, 1911.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—Some time ago representations were made to this Department to the effect that the drug known as Black Antimony was grossly adulterated. In consequence of this, a collection of 77 samples was made during March, April and May of this year, and the following report gives the results of their examination; and it will be seen that the charges of gross adulteration are fully sustained. The following synopsis gives these results in brief:—

	Samples.
Adulterated, as containing no antimony .....	21
Very impure sulphide of antimony .....	9
Impure sulphide of antimony .....	8
Sulphide of antimony .....	39
	—
	77

Black Antimony is not defined by the British Pharmacopoeia; but the purified sulphide is defined as Antimonium Nigrum Purificatum. This is the crude sulphide separated from siliceous material and from arsenical compounds.

Neither is Black Antimony found in the United States Pharmacopoeia, since 1890. In the seventh decennial revision of the U.S.P. it is thus described:—

‘Native Antimony Sulphide, purified by fusion, and as free from arsenic as possible.’

Under the designated tests it is required to dissolve in hydrochloric acid, without leaving more than one (1) per cent of residue. The United States National Dispensatory, 5th Edition, p. 223, describes it as dissolving in 10 parts of hydrochloric acid, without leaving more than 1 per cent of residue.

*Finlay Dun* (Veterinary Medicines, 9th Edition, p. 246), says:—‘The sulphide, or stibnite, the most abundant ore of antimony, when purified by fusion, occurs in dark-grey, metallic, heavy brittle cakes, or as a heavy grey black, crystalline powder, devoid of odour and taste, insoluble in water, and known as black, or crude antimony.’

Black antimony is not now employed in human medicine, but is very largely used as an alterative and anthelmintic for horses and cattle; and is an ingredient of very many condition powders.

From what I have said, it is apparent that no exact standard of purity exists for this article. It is, however, quite certain that it should be essentially the sulphide of antimony, known as stibnite; and I have no hesitation in describing the samples examined as adulterated when they contain no antimony whatever. This is the case with 21 samples, or 27 per cent of the entire collection. Where foreign matter to the extent of nearly 50 per cent is present, I have declared the samples to be *very impure*; and where more than 5 per cent of matters insoluble in hydrochloric acid is found, as *impure*.



3 GEORGE V., A. 1913

It is quite evident that many of the adulterated samples, consisting as they do of metallic iron, silica and carbon (graphite) have had an origin such as to preclude the possibility of any honestly mistaken intent; and are entirely and knowingly frauds, not necessarily known as such to the immediate vendor, but certainly known to the original producer.

I beg to recommend publication of this report as Bulletin No. 255.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



SESSIONAL PAPER No. 14

BULLETIN No. 225—BLACK ANTIMONY.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Residue insoluble in HCl.	Antimony.		

DISTRICT OF NOVA SCOTIA—R. J. WAUGH INSPECTOR.

1911.												
Apr. 18	Black Antimony.	42271	G. C. McDougall, 1½ lb. Kentville, N.S.	1½ lb.	30	Unknown.			1.00	....	42271	Essentially sulphide of antimony.
" 20	"	42272	L. C. Gardener, 1½ lb. Yarmouth, N.S.	1½ "	25	"	N. D. & C. Co., Halifax, N.S.		1.55	....	42272	"
" 24	"	42273	Nat. Drug & Chem. Co., 1½ lb. Halifax, N.S.	1½ "	25	"	N. D. & C. Co., Montreal.		2.05		42273	"
" 24	"	42274	Brown Bros. & Co. 1½ lb. Halifax, N.S.	1½ "	30	"	N. D. & C. Co., Halifax.		1.95	....	42274	"
" 25	"	42275	A. A. Thompson, 1½ lb. Halifax, N.S.	1½ "	37	"	N. D. & C. Co., Halifax.		1.30	....	42275	"

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE—INSPECTOR.

Apr.	6 Black Antimony.	46051	J. C. Jamieson, 1½ lb. Charlottetown.	1½ lb.	45		Lymen & Sons, Montreal.		1.40	....	46051	Essentially sulphide of antimony.
" 7	"	46052	McKinnon Drug Co., 1½ lb. Charlottetown.	1½ "	45		Lymen & Sons, Montreal.		1.45	....	46052	"
" 11	"	46053	J. C. Ferguson, 1½ lb. Souris.	1½ "	45		Nat. Drug Co., Halifax.		6.00	....	46053	Impure sulphide of antimony.
" 24	"	46054	Keir & McFadyen, 1½ lb. Kensington.	1½ "	40		Nat. Drug & Chem. Co., St. John, N.B.		21.00	....	46054	Highly impure sulphide of antimony.
" 25	"	46055	A. W. P. Gourlie, 1½ lb. Summerside.	1½ "	45		Nat. Drug Co., Halifax.		52.30	None.	46055	Adulterated.



BULLETIN No. 225—BLACK ANTIMONY.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Residue insoluble in HCl.	Antimony.		

DISTRICT OF NEW BRUNSWICK—JAS. FERGUSON—INSPECTOR.

1911.	Apr.	3	Black Antimony	45474	The Canadian Drug Co., Ltd., St. John, N.B.	1½ lb.	15	R. Hilliers Bros. & Co., New York, U.S.				45474	Essentially sulphide of antimony.
"	"	3	"	45475	A. C. Smith & Co., St. John, N.B.	1½ "	25	Nat. Drug & Chem. Co., Ltd., St. John, N.B.		43.90	None.	45475	Adulterated.
"	"	4	"	45476	E. Clinton Brown, St. John, N.B.	1½ "	65	" "		27.60	"	45476	"
"	"	10	"	45477	R. T. Mack, Fredericton, N.B.	1½ "	60	" "	Sold as commercial absolute purity not guaranteed.	40.40	"	45477	"
"	"	20	"	45478	Geo. O. Spencer, Moncton, N.B.	1½ "	38	Canadian Drug Co., St. John, N.B.		19.20	"	45478	"

DISTRICT OF QUEBEC—F. N. W. E. BELAND—INSPECTOR.

Mar.	28	Black Antimony.	36931	J. B. Morin, 318½ rue St. Joseph, Q.	½ lb.	13	Unknown	Dr. Ed. Morin & Cie.		45.05	None.	36931	Adulterated.
"	30	"	36932	L. B. Martel, 91 rue St. Joseph, Q.	1½ "	40	Lymans Ltd., Montreal.	Manufacturers.		1.35	....	36932	Essentially sulphide of antimony.
"	31	"	36933	W. Brunet & Cie, 139 rue St. Joseph, Q.	1½ "	15	Unknown	Unknown		44.20	None.	36933	Adulterated.
Apr.	6	"	36934	Alph. Martineau, 374 rue St. Valier, Q.	1½ "	30	"	Dr. Ed. Morin & Cie.		32.75	"	36934	"
"	7	"	36935	Joseph Masson, 508 rue St. Valier, Q.	1½ "	20	"	Nat. Drug Co., Montreal.		97.90	"	36935	"



DISTRICT OF ST. HYACINTHE—J. C. ROULEAU—INSPECTOR.

April 24	Black Antimony	38945	Pharmacie Chevalier, Sorel.	1½ lb.	75		Lyman Knox Co., Montreal.		42·95	None.	38945	Adulterated.
May 2	"	38946	Dr. Vaillancourt, Waterloo.	1½ "	40		"		28·50	"	38946	"
" 4	"	38947	John West, Margog.	1½ "	25		Unknown		74·35	"	38947	"
" 23	"	38948	Dr. Leduc, Marieville.	1½ "	30		Lyman Knox Co., Montreal.		50·02		38948	Very impure sulphide of antimony.
" 9	"	38949	A. J. Bedard, Richmond.	1½ "	50		Mr. Sutherland		1·65	...	38949	Essentially sulphide of antimony.

DISTRICT OF MONTREAL—J. J. COSTIGAN—INSPECTOR.

April 6	Black Antimony	40641	J. E. H. Quipp, 95 Windsor St., Montreal.	1½ lb.	50		Unknown		P.C.		40641	Impure sulphide of antimony.
" 6	"	40642	Joseph Contant, 221 Notre Dame East, Montreal.	1½ "	15		"		39·05		40642	Highly impure sulphide of antimony.
" 8	"	40643	St. Catherine Pharmacy, 20 St. Catherine St. W., Montreal.	1½ "	25		"		1·85		40643	Essentially sulphide of antimony.
" 20	"	40644	H. E. Archambault, 78 Notre Dame E., Montreal.	1½ "	30		Lyman, Ltd., Montreal.		1·25		40644	"
" 20	"	40645	Nat. Drug & Chem. Co., Ltd., Montreal.	1½ "	23				1·30		40645	"

DISTRICT OF OTTAWA—J. A. RICKEY—INSPECTOR.

Mar. 31	Black Antimony	43241	D. J. Stalker, Druggist, Ottawa.	1½ lb.	75		Unknown				43241	Essentially sulphide of antimony.
" 31	"	43242	T. Payment, Druggist Ottawa.	1½ "	75		"				43242	Impure sulphide of antimony.
" 31	"	43243	Beattie & Argue, Druggists, Ottawa.	1½ "	75		"				43243	Adulterated.

\* Contains carbonate sol. matter principally lime and magnesia.

† Contains carbonate sol. matter principally lime and magnesia.



BULLETIN No. 225 - BLACK ANTIMONY.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		Remarks and Opinion of the Chief Analyst.
				Cost.	Quantity.		Residue insoluble in HCl.	Antimony.	
				Cents.					

DISTRICT OF OTTAWA J. A. RICKEY - INSPECTOR - Concluded.

1911.									
April 1	Black Antimony.	43244	N. W. Campbell, 1 1/2 lb. Druggist, Ottawa.	75	Unknown	Ottawa Drug Co., Ottawa.	3.10	43243	Essentially sulphide of antimony.
" 3	"	43245	Wm. Johnston, 1 1/2 lb. Druggist, Smith's Falls.	75	"	Lynam's, Ltd., Montreal.	0.85	43244	"
" 3	"	43246	L. A. Wilson, 1 1/2 lb. Druggist "	75	"	Unknown	33.90	43245	Very impure sulphide of antimony.

DISTRICT OF KINGSTON - JAS. HOGAN - INSPECTOR.

Mar. 24	Black Antimony.	47786	F. Hoag, 1/2 lb. ton. Kingston.	20		N. C. Polson, Kingston.	52.35	47786	Adulterated.
" 27	"	47787	J. S. McKeown, 1 1/2 lb. Belleville.	40		Nat. Drug Co., Toronto.	57.75	47787	Highly impure sulphide of antimony.
" 27	"	47788	D. M. Waters, 1 1/2 lb. Belleville	40	Unknown		0.70	47788	Essentially sulphide of antimony.
" 28	"	47789	McDermid & Junry, Peterboro.	60		Lyman Bros., Toronto.	4.30	47789	"
" 28	"	47790	Warne Drug Co., Peterboro.	60		Nat. Drug Co., Toronto.	95.80	47790	Adulterated.



SESSIONAL PAPER No. 14

DISTRICT OF TORONTO—H. J. DAGER—INSPECTOR.

April	3	Black Antimony	47292	Wm. Crossland, 1½ lb. Barrie.	75	.....	Drug Trading Co., Ltd., Toronto.	.....	1·20	.....	47292	Essentially sulphide of antimony.
"	3	"	47293	W. C. George, 1½ " Orillia.	60	.....	The Nat. Drug & Chem. Co., Ltd., Toronto.	.....	46·35	.....	47293	Very impure sulphide of antimony.
"	4	"	47294	J. S. Fraleigh, 1½ " Midland.	35	.....	Unknown	.....	60·45	.....	47294	"
"	5	"	47295	C. A. Nettleton, 1½ " Penetang.	35	.....	"	.....	53·45	None.	47295	Adulterated.
"	7	"	47296	W. J. Tuck Drug 1½ " Co., Weston, Ont.	40	.....	Lynnan Bros. Co., Ltd., Toronto.	.....	3·55	.....	47296	Essentially sulphide of antimony.

DISTRICT OF LONDON—JNO. TALBOT—ACTING INSPECTOR.

April	26	Black Antimony	48010	E. O. Ritz, Berlin, ½ lb. Ont	25	.....	Unknown	.....	0·45	.....	48010	Essentially sulphide of antimony.
"	26	"	48014	Clark Bros., Ber- lin, Ont.	15	.....	"	.....	12·50	.....	48014	Impure sulphide of antimony.
"	26	"	48016	A. J. Roos, Berlin, ½ " Ont.	10	.....	"	.....	6·40	.....	48016	"
"	26	"	48021	Fred. C. Bond, ½ " Galt.	25	.....	"	.....	9·70	.....	48021	"
"	26	"	48025	W. M. Kirkland, ½ " Galt.	20	.....	Nat. Drug Co., Hamilton.	.....	23·70	None.	48025	Adulterated.

DISTRICT OF WINDSOR—JNO. TALBOT—INSPECTOR.

April	19	Black Antimony	48360	W. H. Stepler, ½ lb. Strathroy.	20	.....	Unknown	.....	42·25	None.	48360	Adulterated.
"	20	"	48367	S. Tapscott & Co., ½ " Brantford.	15	.....	"	.....	1·25	.....	48367	Essentially sulphide of antimony.
"	20	"	48372	A. W. Smiley, ½ " Brantford.	15	.....	"	.....	0·90	.....	48372	"
"	21	"	48377	R. M. Thurtell, ½ " Ingersoll.	15	.....	"	.....	1·60	.....	48377	"
"	21	"	48382	G. A. Ineson, In- gersoll.	15	.....	Nat. Drug Co., Ingersoll.	.....	1·45	.....	48382	"



BULLETIN No. 225 BLACK ANTIMONY.

Date of Collection	Nature of Sample.	No. of Sample	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Residue insoluble in HCl.	Antimony.		

DISTRICT OF MANITOBA—A. C. LARIVIERE—INSPECTOR.

1911.												
May	4 Black Antimony.	43593	Brooking's Drug Store, Winnipeg	1 lb.	40	Unknown	Unknown	.....	26.00	None.	43593	Adulterated.
"	"	43594	W. F. C. Brathwaite, Winnipeg	1½ "	30	"	"	.....	0.85	.....	43594	Essentially sulphide of antimony.
"	"	43595	The Nat. Drug & Chem. Co., Winnipeg.	1½ "	20	"	Nat. Drug & Chem. Co., Montreal.	.....	1.50	.....	43595	"
"	"	43596	Andrew's Drug Store, Winnipeg	1½ "	60	"	Unknown	.....	65.85	.....	43596	Very impure sulphide of antimony.
"	"	43597	Brown's Drug Store, Winnipeg	1½ "	25	"	Martin Bole & Wynne Co., Winnipeg.	Commercial	*62.50	None.	43597	Adulterated.

DISTRICT OF CALGARY—R. W. FLETCHER—INSPECTOR.

May	4 Black Antimony.	43842	T. G. Caisson, Edmonton.	1½ lb.	40	Martin Bole & Wynne, Winnipeg.	.....	.....	46.50	None.	43842	Adulterated.
"	"	43843	A. Archibald, Edmonton.	1½ "	40	Lymans Ltd., Montreal.	.....	.....	1.25	.....	43843	Essentially sulphide of antimony.
"	"	43844	G. H. Graydon, Edmonton.	1½ "	40	Lymans Ltd., Montreal.	.....	.....	47.30	.....	43844	Highly impure sulphide of antimony.
"	"	43845	J. H. Lives, Edmonton.	1½ "	40	Nat. Drug & Chem. Co., Calgary.	.....	.....	1.05	.....	43845	Essentially sulphide of antimony.
"	"	43846	Edmonton Drug Co., Edmonton.	1½ "	40	Lymans Ltd., Montreal.	.....	.....	1.05	.....	43846	"



SESSIONAL PAPER No. 14

DISTRICT OF NELSON—THOS. PARKER—INSPECTOR.

May	3	Black Antimony.	48420	Poole Drug Co., Nelson, B.C.	60	1½ lb.	Lyman's Ltd., Montreal.	38.65	48420	Impure sulphide of an- timony.
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DISTRICT OF VANCOUVER—J. F. POWER—INSPECTOR.

Apr.	22	Black Antimony.	38130	Nat. Drug Co., 125 Pender St., Vancouver.	50	1½ lb.	Vendor	5.70	38130	Essentially sulphide of antimony.
"	22	"	38131	J. A. Tepoorten & Co., 330 Condora St., Vancouver.	50	1½ "	J. L. Hopkins, New York.	2.70	38131	" "
"	24	"	38132	L. G. Henderson, 699 Granville St., Vancouver.	75	1½ "	Nat. Durg Co., Vancouver.	14.50	38132	Impure sulphide of an- timony.
"	24	"	38133	Lair's Drug Store, 648 Main St., Vancouver.	50	1½ "	Nat. Drug Co., Vancouver.	0.95	38133	Essentially sulphide of antimony.
"	24	"	38134	Burns & Cairns, 720 Pender St., Vancouver.	75	1½ "	J. A. Tepoorten, Vancouver.	3.00	38134	" "

DISTRICT OF VICTORIA—D. O'SULLIVAN—INSPECTOR.

May	12	Black Antimony.	47595	F. J. Williams, Victoria, B.C.	50	1½ lb.	Nat. Drug & Chem. Co. Ltd., Victo- ria, B.C.	4.05	47595	Essentially sulphide of antimony.
"	12	"	47596	Wm Jackson & Co., Victoria, B.C.	50	1½ "	Lyman Bros. & Co., Toronto.	2.15	47596	" "
"	12	"	47597	Hall & Co., Victoria, B.C.	50	1½ "	Nat. Drug & Chem. Co., Victoria.	5.25	47597	" "
"	12	"	47598	Geo. A. Fraser, Victoria, B.C.	50	1½ "	Nat. Drug & Chem. Co., Victoria.	4.20	47598	" "
"	13	"	47599	Nat. Drug & Chem. Co., Victoria, B.C.	30	1½ "	Nat. Drug & Chem. Co. Ltd., Mon- real.	1.80	47599	" "

\* Contains iron (magnetic matter over 35 p.c.). Residue, siliceous matter.



## APPENDIX B.

## BULLETIN No. 226—CANNED CORN.

OTTAWA, July 21, 1911.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a report upon 146 samples of Canned Corn purchased throughout the Dominion by our Inspectors, in the months of March, April and May of this year.

All the samples were found to be in an excellent condition of preservation.

It will be noted that except in the far West of Canada, this article is sold pretty generally at 10 cents per tin.

The collection embraces forty-six (46) different brands ; but upon inquiry I find that this does not imply the same number of manufacturers. Many large dealers have special brands put up for themselves by the regular canners.

There is great uniformity in the weight as well as in the character of the contents of the cans, which naturally leads to the inference that the work of preparing canned corn is carefully and systematically conducted.

No guarantee or statement of weight appears on the labels of any of these samples. The actual weight of the contents varies from about 20 to about 22 ounces ; and averages practically 21 ounces or 1 lb. 5 oz.

The chief points to be noted in this report are the frequent presence of acid sulphite of lime, doubtless added for bleaching effect ; and the use of a non-sugar sweetener (usually saccharin) in many samples.

Decided amounts of acid sulphite have been found in 46 samples, and traces in 27 others ; so that this bleaching material has certainly been employed in 73 samples, or 50 per cent of the entire number inspected.

The question of the use of sulphurous acid (the acid present in sulphites) in foods is a very important one. Some information regarding the matter will be found in Bulletin 126, pp. 24-26, published in 1906. In the intervening five years, a great deal of investigation has been carried on ; and a good deal of legislation has resulted. Much of this has been proved to be hasty, in the sense of having been undertaken without full knowledge of the matters treated, and has had to be amended or has remained inoperative. (See F.I.D., No. 89, U.S. Department of Agriculture.)

That sulphurous acid is a poison, is perfectly well ascertained ; but that it acts deleteriously on the human system in the minute quantity present in corn, has not been demonstrated. Much of the sulphite introduced as a bleaching agent is oxidized to sulphate, and thus rendered harmless. Free sulphurous acid is further got rid of in the process of cooking the corn, and it is certain that only very minute traces can remain in the article as served at the table. While I do not think that we are in possession of incontrovertible evidence to justify legislative interference in the matter of the employment of sulphites in food, I believe the question to be of such consequence as to demand further, and very careful investigation ; and in the meantime I would recommend that, in all cases where acid sulphites, or sulphurous acid has been used in the preparation of food products, a declaration of such fact should appear on the label.

The question of the employment of saccharin (or a similar article) to give sweetness to the product, is another moot point. In this case also, I am unable to regard the evidence in the matter as conclusively proving danger to the health of the consumer. Germany has forbidden the use of saccharin, but this is evidently a matter of fiscal policy, rather than a declaration of the dangerous character of the article. The United



## SESSIONAL PAPER No. 14

States has declared against the use of saccharin in foods, basing its action upon the report of a Board of Consulting Scientific Experts. (See F.I.D. 135, of April 26, 1911.) This decision was to have come into force on July 1, 1911; but an inhibiting decree was issued on May 23, postponing the operation of the decision against saccharin, until July 1, 1912.

Saccharin (or other non-sugar sweetener) is present in 29 samples, now reported; *i.e.* in 20 per cent of the collection. Here also, I consider it desirable that manufacturers employing saccharin in food products should be required to announce the presence of the article; since, while the evidence available is not such as to justify the condemnation of saccharin, there exists among physicians and other qualified judges, a conviction that, in some cases, it is capable of doing harm.

I beg to recommend the publication of this report as Bulletin 226.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN 226—CANNED CORN.

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Quantity.	Cost.	NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.
									Total Weight.	Weight of Can.	Weight of Contents.	Sulphites.	Artificial Sweetener (non-sugar)

DISTRICT OF NOVA SCOTIA R. J. WAUGH INSPECTOR.

1911.														
April 18	Canned Corn	42251	B. H. Dodge & Co., 3 seams, Kentville, N.S.	30	30	A. C. Miller, Pictou, Ont.	R. B. Seaton & Co., Halifax, N.S.	Little Chief	oz.	3.3	21.2	Pre- sent.	42251	
18	"	42252	DeWolfe & Lamont, Kentville, N.S.	30	30	"	"	"	24.7	3.5	21.2	Pre sent.	42252	
" 19	"	42253	Wm. Low & Co., 3 Yarmouth, N.S.	25	25	Sincoe Canning Co., Sincoe, Ont.	Manufacturers	Lynn Valley	23.7	3.7	20.0	Trace	42253	
" 19	"	42254	Yerxas, Yarmouth, N.S.	33	33	Bloomfield Packing Co., Bloomfield, Ont.	Dearborn & Co., St. John, N.B.	Quaker	25.7	3.6	22.1	Pre- sent.	42254	
" 20	"	42255	Murphy & DeMont, Windsor, N.S.	30	30	Sincoe Canning Co., Sincoe, Ont.	Manufacturers	Lynn Valley	24.3	3.7	20.6	Pre- sent.	42255	
" 24	"	42256	A. L. Doyle & Co., 3 Halifax, N.S.	25	25	E. D. Smith, Winona, Ont.	"	E. D. S.	25.7	3.7	22.0	Pre- sent.	42256	
" 24	"	42257	Bauld Bros., Ltd., 3 Halifax, N.S.	25	25	Bloomfield Packing Co., Bloomfield, Ont.	"	Quaker	25.4	3.7	21.7	Pre- sent.	42257	
" 24	"	42258	J. F. Crowe & Co., 3 Ltd., Halifax, N.S.	25	25	E. D. Smith, Winona, Ont.	"	E. D. S.	25.7	3.5	22.2	Pre- sent.	42258	
" 24	"	42259	Wentzells, Ltd., Ha- lifax, N.S.	30	30	Sincoe Canning Co., Sincoe, Ont.	"	Lynn Valley	26.2	3.5	22.7	Trace	42259	
" 24	"	42260	F. W. Hodgson, Ha- lifax, N.S.	30	30	"	J. F. Crowe & Co., Halifax, N.S.	"	26.2	3.8	22.4	Pre- sent.	42260	

DISTRICT OF PRINCE EDWARD ISLAND THEO. MOORE INSPECTOR.

April 6	Canned Corn...	46041	Sanderson & Co., 3 seams, Charlottetown.	30	30		Hudson Hebert et al, Gazette, Cie, Montreal.		24.2	3.5	20.7	Pre-sent.	46041
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SESSIONAL PAPER No. 14

6	14	46042	M. A. McLeod, 3	30	Simcoe Canning Co., Simcoe, Ont.	Lynn Valley ..	24 0	3 5	20 5	46042
"	"	46043	Geo. Raekham, Char- 3	30	Old Homestead Can- ning Co., Picton, Ont.	Old Homestead.	24 0	3 5	20 5 Pre- sent.	46043
"	10	46044	C. C. Carlton, Sou- 3	30	J. W. Windsor, Montreal.	Ice Castle ..	23 5	3 7	19 8	46044
"	11	46045	Sterns Bros., Souris. 3	36	A. C. Miller & Co., London, Ont.	Little Chief...	24 5	4 0	20 5	46045
"	24	46046	Geo. A. McLeod, 3	30	W. Boulter & Sons, Picton, Ont.	Lion .....	24 5	4 0	20 5 Trace.	46046
"	24	46047	H. A. Leslie, Ken- 3	36	Lakeside Canning Co., Ltd., Wel- lington, Ont.	Riverdale .....	25 5	4 0	21 5	46047
"	24	46048	A. Bowness, Ken 3	36	Essex Canning & Pre- serving Co., Essex, Ont.	Essex Can- ning Co.	25 2	3 5	21 7	46048
"	25	46049	J. M. Noonan, Sum 3	36	Bloomfield Packing Co., Bloomfield, Ont.	Quaker. ....	25 7	4 2	21 5	46049
"	25	46050	C. Kane, Summer- 3	30	L. M. Schenck Co., St. Catharines, Ont.	Globe .....	24 7	3 2	21 5	46050

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON—INSPECTOR.

Mar. 28	Canned Corn...	45464	Dearborn & Co., St. 3 cans.	30	Bloomfield Packing Co., Bloomfield, Ont.	Quaker.....	25 0	3 5	21 5	Pre- sent.	45464
"	29	45465	Q. Barkers Ltd., St. 3	25	The Essex Canning & Preserving Co. Ltd., Essex, Ont.	Essex .....	25 5	4 0	21 5	.....	45465
"	31	45466	Northrup & Co., St. 3	25	The Delhi Fruit & Veg. Canning Co. Ltd., Delhi, Ont.	Maple Leaf...	24 5	3 7	20 8 Trace.	.....	454 6
Apr. 10	"	45467	John McKnight, 3	27	The Simcoe Canning Co., Simcoe, Ont.	Lynn Valley...	25 0	3 6	21 4	.....	45467
"	11	45468	Woolverton & Gibson 3	33	Dominion Cammers Ltd., Hamilton, Ont.	Gold Bond....	25 5	3 7	21 8 Trace.	Pre- sent.	45468
"	13	45469	D. R. Bedell, An- 3	30	The Ontario Pure Food Co. Ltd.	Red Seal.....	24 5	3 5	21 0	"	45469
"	13	45470	G. T. Baird & Co. 3	30	The Simcoe Canning Co., Simcoe, Ont.	Lynn Valley...	24 4	3 7	20 7	.....	45470
"	19	45471	Mills Eveleigh Ltd., 3	30	Lakeside Canning Co. Ltd., Wellin- gton, Ont.	Riverside.....	25 1	3 7	21 4	.....	45471



BULLETIN No. 226—CANNED CORN.

Date of Collection.	Nature of Sample.	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.
			Quantity.	Cents.	Manufacturer.	Furnisher.		Total Weight.	Weight of Can.	Weight of Contents.	Sulphites.	Artificial Sweetener (non-sugar).

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON—INSPECTOR—Continued.

1911.													
Apr. 21	Canned Corn	45472 M. Bannan, Newcastle, N.B.	3 cans.	30	The Delhi Fruit & Veg. Canning Co., Delhi, Ont.		Maple Leaf	24.7	3.8	20.9	Pre-sent.	...	45472
" 22	"	45473 Frank P. Gatain, Bathurst, N.B.	3 "	30	Brighton Canning Co., Brighton, Ont.		Thistle	24.3	3.3	21.0	"	...	45473

DISTRICT OF QUEBEC—F. X. W. E. BELAND—INSPECTOR.

Mar. 29	Canned Corn	36921 O. Lacroix, 19 rue St. Joseph, Quebec.	3 cans.	30	The Oshawa Canning Co.	Manufacturers	Kitchner	24.8	4.0	20.8	Trace.	Pre-sent.	36921
" 29	"	36922 O. Lacroix, 19 rue St. Joseph, Quebec.	3 "	30	A. C. Miller & Co., Pictou, Ont.	J. B. Reneaud et Cie.	Little Chief	24.5	3.6	20.9	Pre-sent.	"	36922
Apr. 3	"	36923 Chas. S. Rivin, 553 rue de la Couronne, Quebec.	3 "	30	A. C. Miller & Co., Pictou, Ont.	Turcot Frere et Cie	"	24.1	3.5	20.6	"	"	36923
" 4	"	36924 Myrand & Pouliot, 70 rue de la Couronne, Quebec.	3 "	30	Boulton Pictou, Ont.	J. B. Reneaud et Cie.	Lion	25.7	3.7	22.0	...	...	36924
" 5	"	36925 Arthur Rinfret, 414 rue St. Joseph, Quebec.	3 "	30	Farmers Canning Co., Bloomfield, Ont.	T. Ledroit et Frere	Golden West	25.0	3.6	21.4	...	Pre-sent.	36925
" 10	"	36926 Mad. V. Marie Bertrand, 151 rue Massue, Quebec.	3 "	30	Simcoe Canning Co., Simcoe, Ont.	J. B. E. Latellier	Lynn Valley	24.2	3.6	20.6	Pre-sent.	...	36926
" 10	"	36927 G. E. Hamel, 914 rue St. Valier, Quebec.	3 "	30	Simcoe Canning Co., Simcoe, Ont.	N. Turcot et Cie	"	24.2	3.5	20.7	"	...	36927



SESSIONAL PAPER No. 14

"	10	"	"	36928	Emile Blouin, 30 rue 3	"	30	Boulters, Picton, Ont	Turcot et Frère	Lion	24.2	3.6	20.6	"	36928
"	10	"	"	36929	Carillon, Quebec.	"	30	Boulters, Picton, Ont	Unknown	"	24.0	3.6	20.4	"	36929
"	10	"	"	36930	Eudore Delisle, 2 rue 3	"	30	Simcoe Canning Co.	Unknown	Lynn Valley	25.5	3.6	21.9	"	36930

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU—INSPECTOR.

April 24	Canned Corn	38934	C. Labelle et Cie, 3 cans.	Sorel.	Napance Canning Co., Napance, Ont.	Canada's Pride	24.7	3.5	21.2	Pre-sent.	38934
"	"	38935	L. Ed. Choquet, 3	Farnham.	The Simcoe Canning Co., Simcoe, Ont.	Lynn Valley.	24.7	3.7	21.0	"	38935
"	"	38936	Côté et Cie, St. Jean 3	"	A. C. Miller & Co., Picton, Ont.	Little Chief.	25.5	4.0	21.5	"	38936
"	"	38937	D. Cusson, St. Jean. 3	"	Exeter Canning Co., Ltd., Exeter, Ont.	Excelsior.	25.5	3.7	21.8	Pre-sent.	38937
"	"	38938	Isabelle & Rivet, 3	Granby.	Bloomfield Packing Co., Ltd., Bloomfield, Ont.	Quaker.	25.4	3.7	21.7	"	38938
May 2	"	38939	J. N. Turcot, Drummondville.	"	Mf. for Hudon Herbert et Cie, Ltd., Montreal.	Gazelle.	24.4	3.4	21.6	Pre-sent.	38939
"	"	38940	T. A. Bourgault, 3	"	W. Boulter & Sons, Picton, Ont.	Lion.	24.6	4.2	20.4	Trace.	38940
"	"	38941	E. B. Greely, Sutton.	"	The Old Homestead, Picton, Ont.	Old Homestead.	24.2	3.5	20.7	"	38941
"	"	38942	A. M. Hunter, Foster, P.Q.	"	Napance Canning Co., Napance, Ont.	Canada's Pride	25.4	3.6	21.8	Trace.	38942
"	"	38943	W. B. Murray, Sherbrooke.	"	Miller & Co., Trenton, Ont.	Log Cabin.	24.7	3.8	20.9	Pre-sent.	38943

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Mar. 24	Canned Corn	40601	Laporte Martin et Cie, Ltd., St. Paul St., Montreal.	27	A. C. Miller & Co., Picton, Ont.	Little Chief.	24.2	3.5	20.7	Pre-sent.	40601
"	"	40602	"	26	Miller & Co., Trenton, Ont.	Log Cabin.	23.2	3.5	19.7	Trace.	40602
"	"	40603	"	27	"	Victoria.	24.8	3.5	21.3	Pre-sent.	40603
"	"	40604	"	26	Simcoe Canning Co., Simcoe, Ont.	Lynn Valley.	24.6	3.5	21.1	"	40604
"	"	40605	"	27	The Farmers Canning Co., Ltd., Bloomfield, Ont.	Farmers.	25.2	3.7	21.5	"	40605
"	"	40606	"	26	W. Boulter & Sons, Picton, Ont.	Lion.	24.5	3.6	20.9	"	40606



BULLETIN No. 226—CANNED CORN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.			
									Total Weight.	Weight of Can.	Weight of Contents.	No. of Sample.
					(Quantity.		Manufacturer.	Furnisher.				
					Cents.							

DISTRICT OF MONTREAL—J. J. COSTIGAN—INSPECTOR—Continued.

1911.	Mar. 25	Canned Corn...	40607	A. Rochon, 25 Prince Arthur St., Montreal.	30	Bloomfield Co., Ltd., Bloomfield, Ont.	Quaker.		25.7	3.5	23.2	Pre-sent.	40607
"	25	"	40608	H. Perrier, 245 St. Catherine St., Montreal.	30	L. Chaput Fils et Cie, Montreal.	Prinus.		25.0	3.6	21.4	Trace.	40608
"	25	"	40609	"	30	Aylmer Canning Co., Ltd., Aylmer, Ont.	Canada First.		24.3	3.7	20.6	Pre-sent.	40609
"	25	"	40610	O. Martel, 166 Dorchester St., Montreal.	30	Hudson-Hobert et Cie, Ltd., Montreal.	Gazelle.		24.3	3.6	20.7		40610

DISTRICT OF OTTAWA—J. A. RICEY—INSPECTOR.

Apr.	3	Canned Corn...	43231	W. Hyndman, Smiths Falls, Ont.	30	Bloomfield Co., Bloomfield, Ont.	Quaker.		25.0	3.5	21.5	Pre-sent.	43231
"	3	"	43232	H. N. Layng, Smiths Falls, Ont.	30	Old Homestead Canning Co., Picton, Ont.	Old Homestead.		24.2	3.5	20.7	Pre-sent.	43232
"	4	"	43233	A. L. Pinard & Sons, Rideau St., Ottawa.	30	Sincoe Canning Co., Sincoe, Ont.	Lynn Valley.		24.5	3.6	20.9	Trace.	43233
"	4	"	43234	McDonald Bros., 441 Gladstone Ave., Ottawa.	30	Canadian Canners Ltd., Hamilton.	White Rose.		24.5	3.8	20.7		43234
"	4	"	43235	Goodall Bros., Ottawa.	30	Sincoe Canning Co., Sincoe, Ont.	Lynn Valley.		24.2	3.6	20.6		43235



"	"	5	"	"	43236	T. McCormick, Arm- prior.	30	"	30	Canadian Canners Ltd., Hamilton.	Unknown	White Rose.	24.8	3.6	21.2	Trace.	43236
"	"	6	"	"	43237	R. McGregor Ltd., Bank St., Ottawa.	30	"	30	Bloomfield Packing Co. Ltd., Bloom- field, Ont.	J. Freedman, Ottawa.	Quaker.	25.2	3.6	21.6	Pre- sent.	43237
"	"	6	"	"	43238	W. B. Graham, Bank St., Ottawa.	30	"	30	Simcoe Canning Co., Simcoe, Ont.	Unknown	Lynn Valley.	25.6	3.8	21.8		43238
"	"	7	"	"	43239	J. Mayberry & Co., Prescott.	30	"	30	Canadian Canners Ltd., Hamilton.	Manufacturers	Little Chief.	24.5	4.0	20.5		43239
"	"	7	"	"	43240	McDermid & McCar- thy, Prescott.	30	"	30	Boulter & Sons, Pic- ton, Ont.	"	Lion.	24.9	3.6	21.8	Trace.	43240

DISTRICT OF KINGSTON—JAS. HOGAN—INSPECTOR.

Mar.	24	Canned Corn	47776	W. E. Hopkinson, Kingston.	30	"	30	"	30	"	Fenwick Hendry Co., Kingston.	Solar.	25.2	3.5	21.7	Pre- sent.	47776
"	24	"	47778	L. Murphy, ston.	30	"	30	"	30	Napance Canning Co.	"	Canada's Pride	25.0	3.6	21.4		47778
"	24	"	47779	S. T. Kirk, Kingston	30	"	30	"	30	"	Fenwick Hendry Co., Kingston.	Crossed Keys.	25.0	3.5	21.6	Pre- sent.	47779
"	24	"	47780	P. A. Haffner, King- ston.	30	"	30	"	30	"	"	"	24.9	3.6	21.3	"	47780
"	24	"	47781	J. McCulla, King- ston.	30	"	30	"	30	Canning Co., Picton.	"	Old Home- stead.	25.5	3.7	21.8		47781
"	27	"	47782	R. Elvins, Belleville.	30	"	30	"	30	S. S. Potter Co., Mountain View, Ont.	"	Mountain View	25.0	3.5	21.5		47782
"	27	"	47783	H. E. Fairfield, Bel- leville.	30	"	30	"	30	"	Eby Blain, Toronto	Anchor.	25.2	3.7	21.5	Pre- sent.	47783
"	27	"	47784	H. Crozier, Cobourg.	30	"	30	"	30	Bloomfield Packing Co.	"	Quaker.	25.6	3.6	22.0	"	47784
"	28	"	47785	J. Curtis, Port Hope	30	"	30	"	30	Lakeside Canning Co.	"	Maple Grove.	24.5	3.4	21.1		47785
"	24	"	47792	Geo. Gibson, King- ston.	30	"	30	"	30	"	Geo. Robertson & Son, Kingston.	Old Home- stead.	24.1	3.7	20.4		47792

DISTRICT OF TORONTO—H. J. DAGGER—INSPECTOR.

April	3	Canned Corn	47282	A. C. McNabb, Bar- rie.	38	"	38	"	38	Brighton Canning Co., Brighton, Ont.	"	Thistle.	24.9	3.7	21.2		47282
"	3	"	47283	B. R. Kean, Orillia.	30	"	30	"	30	The Delhi Fruit & Veg. Canning Co., Ltd., Delhi, Ont.	"	Maple Leaf.	24.8	3.7	21.1		47283
"	4	"	47284	The Playfair Preston Co., Ltd., Midland	30	"	30	"	30	The Old Homestead Canning Co., Pic- ton, Ont.	"	Old Home- stead.	24.8	3.6	21.2	Pre- sent.	47284
"	5	"	47285	W. H. Rourke, Pene- tang.	38	"	38	"	38	Aylmer Canning Co., Ltd., Aylmer, Ont.	"	Canada First.	24.5	3.5	21.0	Trace.	47285



BULLETIN No. 226—CANNED CORN.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				No. of Sample.
				Quantity.	Cents.	Manufacturer.	Furnisher.		Total Weight.	Weight of Can.	Weight of Contents.	Sulphites.	Artificial Sweetener (non-sugar).

DISTRICT OF TORONTO—H. J. DAGGER—INSPECTOR *Continued.*

1911.	Apr. 6	Canned Corn...	47286	W. J. Nichol, 252 3/4 East, Queen St. Toronto.	30	3 cans	Bloomfield Packing Co., Bloomfield, Ont.	Quaker. ....	25.6	3.6	22.0	Pre-sent.	47286
"	6	"	47287	The Wm. Davies Co., Ltd., 300 Queen St. East, Toronto.	30	3 "	"	"Crisp" Brand, packed expressly for grocers, Ltd. Peerless ....	26.0	4.0	22.0	"	47287
"	6	"	47288	F. R. Nicholson, 380 College St. Toronto.	30	3 "	Beamsville Preserving Co., Beamsville, Ont.	"	24.7	3.7	21.0	"	47288
"	6	"	47289	John Grigor, 568 College St., Toronto.	25	3 "	The Oshawa Canning Co., Ltd., Oshawa.	Kitchner.....	25.0	4.0	21.0	Pre-sent.	47289
"	10	"	47290	A. Ballentine & Bros., 169 John St., South Hamilton.	30	3 "	Standard Canning Co., Hamilton.	Old Church....	24.5	3.7	20.8	"	47290
"	10	"	47291	Trebilcock & Beny, 310 King St. East, Hamilton.	30	3 "	"	Jas. Turner & Co., Hamilton.	24.5	3.7	20.8	"	47291

DISTRICT OF LONDON—JNO. TALBOT—ACTING INSPECTOR.

April 26	Canned Corn...	48006	Stuebing & Son, 3 cans. Berlin, Ont.	30	Bloomfield Packing Co., Bloomfield, Ont.	Quaker. ....	24.2	3.5	20.7	Pre- sent.	48006
" 26	"	48008	Randall & Roos, Ber-3 " lin, Ont.	25	"	"	25.4	3.7	21.7	Pre- sent.	48008



"	26	48018	Betzner & Co., Berlin, Ont.	30	Delhi Canning Co., Delhi, Ont.	.....	Maple Leaf...	24.7	3.5	21.2	Pre-sent.	48018
"	27	48026	Hollands & Macaulay, Galt.	30	Brighton Canning Co., Brighton, Ont.	.....	Thistle.....	24.5	3.7	20.8	.....	48026
"	25	48386	A. J. Groon, Guelph.	30	Aylmer Canning Co., Aylmer, Ont.	.....	Canada First.	25.0	4.0	21.0	Trace.	48386
"	25	48391	J. M. Dooley, Guelph.	38	Delhi Canning Co., Delhi, Ont.	.....	Maple Leaf..	24.8	3.5	21.3	Pre-sent.	48391
"	25	48393	Guelph Co-op. Assn., Guelph.	30	"	.....	"	25.2	3.8	21.4	"	48393
"	25	48395	Jas. Gow, Guelph.	30	Aylmer Canning Co., Aylmer, Ont.	.....	Canada First.	25.5	3.8	21.7	.....	48395

DISTRICT OF WINDSOR—JNO. TALBOT—INSPECTOR.

1911.	Apr. 18	Canned Corn....	48344	A. M. Smith & Co., London, Ont.	27	Aylmer Canning Co., Aylmer, Ont.	.....	Canada First (Honey Dew)	oz.	3.6	20.8	Pre-sent.	48344
"	18	"	48345	Elliot Marr & Co., London, Ont.	24	Delhi Canning Co., Delhi, Ont.	.....	Maple Leaf...	24.5	3.6	20.9	.....	48345
"	18	"	48349	W. T. Mullens, London West.	25	Oshawa Canning Co., Oshawa.	.....	Kitchner..	25.8	3.8	22.0	.....	48349
"	18	"	48351	Mrs. A. M. Tillman, London West.	30	Aylmer Canning Co., Aylmer, Ont.	.....	Canada First..	24.2	3.5	20.7	Pre-sent.	48351
"	18	"	48353	G. Finnigan, London West.	30	Gorman Eckert & Co., London.	.....	Rex.....	24.5	4.0	20.5	Trace.	48353
"	19	"	48355	Wm Cross, Strathroy.	30	Delhi Canning Co., Delhi, Ont.	.....	Maple Leaf...	24.5	3.7	20.8	.....	48355
"	19	"	48361	Dom. Cannors Ltd., Strathroy.	Nil	Vendors....	.....	Taken from stock in can- nery not labelled.	24.6	3.5	21.1	Pre-sent.	48361
"	20	"	48373	Geo. Harp, Brantford.	30	Brighton Canning Co.	.....	Thistle.....	24.2	3.5	20.7	.....	48373

DISTRICT OF MANITOBA—A. C. LARIVIÈRE—INSPECTOR.

Apr. 19	Canned Corn....	43563	W. J. Young, Brandon. don.	40	The Delhi F. & Veg. Canning Co. Ltd., Delhi, Ont.	.....	Maple Leaf...	24.0	3.5	20.5	.....	43563	
"	19	"	43564	W. J. Young, Brandon. don.	40	Burlington Canning Co. Ltd., Burling- ton, Ont.	.....	Burlington....	24.8	3.5	21.3	Trace.	43564
"	19	"	43565	Smith & Burton, Brandon.	40	Kent Canning Co., Chatham, Ont.	.....	Kent.....	24.2	3.4	20.8	Pre- sent.	43565
"	19	"	43566	The Codville Co. Ltd., Brandon.	29	The Delhi F. & Veg. Canning Co. Ltd., Delhi, Ont.	.....	Maple Leaf...	24.2	3.7	20.5	.....	43566



BULLETIN No. 226—CANNED CORN.

Date of Collection.	Nature of Sample.	No. of Sample.	NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.				
			Name and Address of Vendor.	Name and Address of Manufacturer.		Quantity.	Cents.	Purnisher.	Total Weight.	Weight of Can.

DISTRICT OF MANITOBA—A. C. LARIVIERE—INSPECTOR—Continued.

1911.													
Apr.	20	Canned Corn	43567	Foley Bros Larson, 3 cans Winnipeg.	27	The Delhi F. & Veg. Canning Co., Ltd., Delhi, Ont.	Maple Leaf	25.5	3.6	21.9		43567	
"	26	"	43568	Foley Bros Larson, 3 " Winnipeg.	26	Aylmer Canning Co. Ltd., Aylmer, Ont.	Canada First	24.6	3.6	21.0	Pre sent.	43568	
"	20	"	43569	The Robin Martin 3 " Co. Ltd., Winnipeg	30	The Old Homestead Canning Co., Pic- ton, Ont.	Old Home stead.	25.4	3.7	21.7	Trace.	43569	
"	21	"	43570	H. Slator, 148 Sher- brooke, Winnipeg.	30	Burlington Canning Co., Burlington, Ont.	Burlington	24.5	3.7	20.9	Pre sent.	43570	
"	21	"	43571	The Sweedish & Gro- cery Co., Winnipeg	30	Winona Preserving Co., Winona, Ont.	Ben Hur	24.5	3.7	20.8		43571	
"	21	"	43572	The Sweedish & Gro- cery Co., Winnipeg	30	The Oshawa Canning Co. Ltd., Oshawa, Ont.	Kitchner	25.2	3.7	21.5	Pre sent.	43572	

DISTRICT OF CALGARY—R. W. FLETCHER—INSPECTOR.

May	3	Canned Corn	43832	J. H. Morris & Co., 3 cans. Edmonton.	35		Thames Canning Factory, Thames- ville, Ont.	Thames	25.7	3.9	21.8	Trace	43832
"	3	"	43833	Hallier & Aldridge, 3 " Edmonton.	35		"	"	26.0	3.6	22.4		43833
"	3	"	43834	Acme Co., Ltd., Ed- monton.	35		W. Boulter & Sons, Picton, Ont.	Lion	24.4	3.4	21.0		43834
"	3	"	43836	Capital Mercantile Co., Edmonton.	35		Balfour Smye & Co., Hamilton, Ont.	Tartan	24.3	3.7	20.6	Trace	43836



SESSIONAL PAPER No. 14

"	9	43837	L. T. Mewburn & Co., Ltd., Calgary.	3	40	Delhi Fruit and Veg. Canning Co., Delhi, Ont.	Maple Leaf	24.2	3.4	20.8	43837
"	10	43838	Georgeson & Co., Ltd., Calgary.	3	40	"	"	24.3	3.4	20.9 Trace	43838
"	10	43839	Campbell Wilson & Horne, Calgary.	3	40	Aylmer Canning Co., Aylmer, Ont.	Canada First	24.0	3.4	20.6 Pre-sent.	43839
"	10	43840	G. F. & J. Galt, Calgary.	3	40	Miller & Co., Trenton, Ont.	Log Cabin	25.8	3.9	21.9 Trace	43840
"	10	43841	The Hudson Bay Co., Calgary.	3	40	Aylmer Canning Co., Aylmer, Ont.	Canada First	24.2	3.6	20.6	43841
"	10	43900	The Hudson Bay Co., Edmonton.	3	35	Canadian Cannery Ltd., Hamilton, Ont.	Auto	21.6	3.6	21.6	43900

## DISTRICT OF VANCOUVER—J. F. POWER—INSPECTOR.

April 24	Canned Corn	38155	Wells & Co., Vancouver.	3	45	Canadian Cannery Ltd., Hamilton, Ont.	Auto	24.5	3.5	21.0	38155
"	"	38156	Gruchy & Carlow, Vancouver.	3	40	E. D. Smith, Winona, Ont.	E. D. S.	24.5	3.5	21.0 Trace	38156
"	"	38157	Samuel Bell, Vancouver.	3	35	Strathroy Canning Co., Strathroy, Ont.	Middlesex	25.0	3.5	21.5 Pre-sent.	38157
"	"	38158	Hudson Bay Co., Vancouver.	3	30	Bloomfield Packing Co., Bloomfield, Ont.	Quaker	25.0	3.5	21.5 Pre-sent.	38158
"	"	38159	W. N. Malkin Co., Vancouver.	3	50	Canadian Cannery Association.	Canada First	24.0	3.5	20.5 Pre-sent.	38159
"	"	38160	J. S. Foran, Vancouver.	3	40	Farmers Canning Association.	Farmer	25.0	3.2	21.8	38160
"	"	38161	Clark's Grocery, Vancouver.	3	40	Exeter Canning & Preserving Co., Exeter, Ont.	Excelsior	25.5	3.5	22.0 Pre-sent.	38161
"	"	38162	T. F. McDowell, Vancouver.	3	40	Dominion Cannery, Hamilton.	Faultless	24.7	3.7	21.0 Pre-sent.	38162
"	"	38163	Ed. F. Allen, Stall 19, Granville Public Market, Vancouver.	3	40	Belleville Canning Co., Belleville, Ont.	Queen	23.7	3.2	20.5	38163
"	"	38164	Walford & Roney, Vancouver.	3	40	Brighton Canning Co., Brighton, Ont.	Thistle	25.5	3.5	22.0	38164



BULLETIN No. 226 CANNED CORN.

Date of Collection.	Nature of Sample.	Name and Address of Vendor.	NAME AND ADDRESS OF MANUFACTURER OR FURNISHER AS GIVEN BY THE VENDOR.		Inspector's Report. (Is not an expression of opinion.)	RESULTS OF ANALYSIS.						No. of Sample.	
			Quantity.	Cents.		Manufacturer.	Furnisher.	Total Weight.	Weight of Can.	Weight of Contents.	Sulphites.		Artificial Sweetener (non-sugar).

DISTRICT OF VICTORIA D. O'SULLIVAN—INSPECTOR.

1911.											
May	5	Canned Corn....	47575	Windsor Grocery Co., Victoria, B.C.	40	Brighton Canneries Co., Brighton, Ont.	24.5	3.5	21.0	Pre-sent.	47575
"	5	"	47576	D. H. Ross & Co., Victoria, B.C.	25	Bloomfield Packing Co., Bloomfield, Ont.	25.6	3.7	21.9	Pre-sent.	47576
"	5	"	47577	West End Grocery Co. Ltd., Victoria, B.C.	40	Canadian Cannery Ltd., Hamilton, Ont.	25.0	3.5	21.5	Pre-sent.	47577
"	11	"	47578	Harrison & McDonald, Victoria, B.C.	40	Bloomfield Packing Co., Bloomfield, Ont.	25.0	3.6	21.4	Pre-sent.	47578
"	11	"	47579	Acton Bros., Victoria, B.C.	40	Bloomfield Packing Co., Bloomfield, Ont.	24.8	3.6	21.2	Trace.	47579
"	11	"	47580	R. Erskine & Co., Victoria, B.C.	40	Canadian Canneries Ltd., Hamilton, Ont.	24.3	3.3	21.0	Pre-sent.	47580
"	11	"	47581	E. J. Bailey, Victoria, B.C.	40	J. H. Wethey, Ltd., St. Catharines, Ont.	24.5	3.5	21.0		47581
"	12	"	47582	Copas & Young, Victoria, B.C.	40	Balfour Stuye & Co., Hamilton, Ont.	24.3	3.7	20.6	Trace.	47582
"	12	"	47583	H. O. Kirkham, Victoria, B.C.	40	Bloomfield Packing Co., Bloomfield, Ont.	25.8	3.7	22.1	Pre-sent.	47583
"	12	"	47584	W. B. Hall, Victoria, B.C.	40	Canadian Canneries Ltd., Hamilton, Ont.	24.5	3.6	20.9		47584



SESSIONAL PAPER No. 14

## APPENDIX C.

## BULLETIN No. 227—FERTILIZERS, 1911.

OTTAWA, September 18, 1911.

W. J. GERALD, Esq.,

Deputy Minister of Inland Revenue.

SIR,—I have the honour to hand you a report upon 161 samples of fertilizers, as sold throughout the Dominion of Canada during the current year. The collection was made during the month of May ; and this report, like the collection which it discusses, is issued much later than should be the case. The delay as you are aware, has been due to causes which could not be controlled. The rebuilding of our laboratories, and the loss of two members of this staff, in one case by death, in the other by disqualifying illness, has put the work of this branch, very far behind.

As in my report for last year (See Bulletin 213) I have to note a large number of failures to comply with the requirements of the Fertilizers Act of 1909. In many cases this appears to be the fault of the vendor ; rather than that of the manufacturer. Indeed, so far as my experience goes, I have found on the part of manufacturers, a very praiseworthy desire to live up to the requirements of the Act governing the sale of fertilizers. The conditions named by the Act are so simple and plain that there would seem to be no excuse for failing to meet them. It is difficult to see how anything less could be demanded, consistently with giving effective protection to the purchaser.

In some instances, there seems to be a lack of care exercised by the inspector ; and in the present case this is very marked as regards the Quebec district. When a fertilizer is sold with its registration number, there is no difficulty in identifying it ; and in finding the claim made for it by the manufacturer. Even without the registration number, if the specific name of the brand be given, together with the name of the manufacturer, it is usually possible to identify the fertilizer by means of the records filed in the Department. When, however, neither the registration number nor the name of the brand is given, and the article is simply stated to be a fertilizer, it is apparent that no trustworthy identification can be made.



3 GEORGE V., A. 1913

Of the 161 samples now reported, 123 samples have been identified with sufficient certainty to enable me to declare them up to guaranteed value in fertilizing materials. Of the remaining 38 samples, 4 are not registered. These are as follows :—

- No. 38195—Bonemeal—Portland Seed Co.  
 38200—Beef Scraps—Swift & Co., Chicago.  
 47603—Whale Guano—Pacific Whaling Co.  
 47629—Bone & Blood Fertilizer—Frye Bruhne & Co., Seattle.

The vendors of these brands are of course amenable to the penalties named in Section 15 of the Fertilizers Act, 1909.

Fourteen (14) samples, about which identification appears to be satisfactory, fail to comply with the guarantees; but in most of these cases, the deficiency is compensated by an overplus of other fertilizing constituents. A detailed list of these samples is given :—

- No. 46631—deficiency of 12·10 p. c. phosphoric acid.  
 46636—deficiency of 1·71 p. c. potash is compensated.  
 46637—deficiency of 7 p. c. phosphoric acid.  
 46639—deficiency of 1·27 p. c. potash is compensated.  
 45486—deficiency of 3·55 p. c. phosphoric acid is compensated.  
 38956—deficiency of 0·76 p. c. nitrogen is compensated.  
 40675—deficiency of 2 p. c. phosphoric acid is compensated.  
 48529—deficiency of 2 p. c. nitrogen is compensated.  
 47320—deficiency of 4·75 p. c. phosphoric acid is partially compensated.  
 48056—deficiency of available phosphoric acid, but guaranteed amount of total phosphoric acid.  
 48063—deficiency of 1·1 p. c. potash.  
 48030—deficiency of 1 p. c. nitrogen is compensated.  
 47604—deficiency of 1·16 p. c. nitrogen is compensated.  
 47605—deficiency of 2·22 potash.

There are, therefore, only 4 samples in which uncompensated deficiency of more than one half of one per cent. of a fertilizing constituent is present; viz. :—

- No. 46631—Bone Meal—Nova Scotia Fertilizer Co., Agents for manufacturer.  
 48063—Celery and Potato Fertilizer—Buffalo Fertilizer Co.  
 47605—Fertilizer B—Victoria Chemical Co.  
 46637—Registration 302, E. E. McNutt, Truro.

These samples have been repeatedly analysed, and the findings corroborated. The deficiencies in the four samples are sufficiently notable to bring them under the provisions of Section 15 of the Act.

The remaining 20 samples cannot be identified with sufficient certainty to enable me to pronounce upon their character. An attempt has been made to identify them, with the aid of the imperfect information furnished and it is probable that the following is correct :—

- No. 46638—Probably up to guarantee as 253  
 46062       “       “       “       as 324  
 36938       “       “       “       as 253



## SESSIONAL PAPER No. 14

No. 36941—Probably up to guarantee as 210

36944       “       “       “       as 399

36946       “       “       “       as 400

38952       “       “       “       as 253

48527—Compensating value if No. 188

47322       “       “       “       291

38197       “       “       “       440

38201—If No. 297 it is slightly low in phosphoric acid.

38203 } These samples are apparently inverted, as regards registration

38204 } numbers. Are, in this case, up to guarantee.

The remaining 7 samples do not warrant any attempt at identification.

I beg to recommend publication of this report as Bulletin No. 227,

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF NOVA SCOTIA—

1911.							
May 19	Ceres Brand...	46621	A. L. Melvin & Co., Halifax, N.S.	5 lbs.	Nil	Nova Scotia Fertilizer Co., Halifax, N.S.	.....
" 10	Potato Phos- phate.	46622	" " ..	5 " ..	"	" " ..	.....
" 12	Slag. ....	46623	Nova Scotia Fertilizer Co., Halifax, N.S.	5 " ..	"	R. A. Munroe, Glas- gow, Scotland.	.....
" 12	Ceres. ....	46624	" " ..	5 " ..	"	Vendors. ....	.....
" 12	" " " " ..	46625	" " ..	5 " ..	"	" " " " ..	.....
" 15	Eureka Phos- phate.	46626	Halifax Seed Co., Halifax, N.S.	5 " ..	"	Pidgeon Co., Windsor, N.S.	.....
" 15	Potato Manure..	46627	" " ..	5 " ..	"	" " " " ..	.....
" 16	Soluble Pacific Guano.	46628	G. F. Roy, Kentville, N.S.	5 " ..	"	Am. Agr. Chem. Co., New York.	.....
" 16	Swift's Lowell Potato Manure	46629	" " ..	5 " ..	"	Swift's Fertilizer Co., Boston, Mass.	.....
" 16	Chute's Special .	46630	Berwick Fruit Co., Berwick, N.S.	5 " ..	"	Pidgeon Fertr. Co., Windsor, N.S.	.....
" 16	Bone Meal. ....	46631	" " ..	5 " ..	"	Manufacturers : Staackman & Co., Ger- many. Furnishers : The Nova Scotia Fer- tilizer Co., Halifax, N.S.	.....
" 16	Acid Phosphate.	46632	" " ..	5 " ..	"	Furnishers : The Nova Scotia Ferti- lizer Co., Halifax, N.S.	.....
" 16	Superphosphate with Potash.	46633	Burgess & Co., Wolf- ville, N.S.	5 " ..	"	Bowker Co., Boston..	.....
" 16	Market Garden..	46634	" " ..	5 " ..	"	" " " " ..	.....
" 16	Grain and Grass	46635	R. E. Harris & Son, Wolfville, N.S.	5 " ..	"	" " " " ..	.....
" 17	Ground Bone. ...	46636	Pidgeon Fertilizer Co., Windsor, N.S.	5 " ..	"	Vendors. ....	.....
" 19	Basic Phosphate	46637	E. E. McNutt, Truro, N.S.	5 " ..	"	A. Hickman Co., Bil- son, Eng.	.....



## SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD.

Registration No.	Analysis of Ssmple.	RESULTS OF ANALYSIS.							No. of Sample.	Remarks and Opinion of the Chief Analyst.		
		Nitrogen, p.c		Phosphoric Acid, p.c.				Potash.			Moisture.	
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.					Total available.

R. J. WAUGH, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
37	As guaranteed	.....	2	.....	.....	2	9	7	2	.....	46621	Up to guarantee.
	As found.....	1.28	1.56	.....	.....	0.45	9.45	9.00	3.12	.....		
38	As guaranteed	.....	2	.....	.....	.....	9	7	4	.....	46622	"
	As found.....	1.27	1.53	.....	.....	0.75	9	8.25	4.53	.....		
47	As guaranteed	.....	.....	.....	.....	.....	14	.....	.....	.....	46623	"
	As found.....	.....	.....	.....	10.45	4.05	14.50	10.45	.....	.....		
37	As guaranteed	.....	2	.....	.....	2	9	7	2	.....	46624	"
	As found.....	2.26	2.75	.....	.....	1.25	9.10	7.85	2.39	.....		
41	As guaranteed	.....	2.5	.....	.....	2	.....	6	10	.....	46625	"
	As found.. ...	2.17	2.64	.....	.....	1	9.85	8.85	9.67	.....		
32	As guaranteed	.....	3	.....	.....	.....	.....	7	2.5	.....	46626	"
	As found.....	1.96	2.38	.....	.....	1.90	9.45	7.55	3.59	.....		
29	As guaranteed	.....	2.5	.....	.....	.....	.....	6	5	.....	46627	"
	As found.....	1.89	2.30	5.90	1.70	2.30	9.90	7.60	5.58	.....		
14	As guaranteed	2.06	2.5	6	2	1	9	8	1.5	.....	46628	"
	As found.....	1.98	2.42	7.25	2.95	1.25	11.45	10.20	2.02	.....		
114	As guaranteed	1.64	2	4	3	1	8	7	4	.....	46629	"
	As found.....	1.60	1.94	4.50	3.70	1.05	9.25	8.20	3.86	.....		
275	As guaranteed	4	4.8	6	1	2	9	7	4	.....	46630	"
	As found.. ...	3.48	4.22	5.80	2.85	0.50	9.15	8.65	3.74	.....		
44	As guaranteed	.....	3	.....	.....	.....	*	.....	.....	.....	46631	Below guarantee in phosphoric acid.
	As found.....	2.29	2.78	.....	.....	.....	10.90	.....	.....	.....		
	As guaranteed	.....	.....	.....	14	2	16	14	.....	.....	46632	Up to guarantee.
328	As found.....	.....	.....	.....	.....	1.65	18.40	16.75	.....	.....		
	As guaranteed	.....	.....	6	4	1	11	10	2	.....	46633	"
99	As found.....	.....	.....	5.95	2.35	1.75	11.80	10.05	2.24	.....		
	As guaranteed	2.47	3	4	2	1	7	6	10	.....	46634	"
90	As found.. ...	3.92	4.77	3	3.15	0.85	7	6.15	11.04	.....		
	As guaranteed	.82	1	4	4	1	9	8	4	.....	46635	"
120	As found.....	.90	1.09	4.90	6.40	1	12	11	4.55	.....		
	As guaranteed	.....	2	.....	.....	2	9	7	2	.....	46636	Below guarantee in potash; above in phosphoric acid and nitrogen.
37	As found.....	2.82	3.42	.....	.....	2.50	12	9.50	0.29	.....		
302	As guaranteed	.....	.....	.....	15.40	3.85	19.25	.....	.....	.....	46637	Below guarantee in phosphoric acid.
	As found.....	None.	None.	.....	.....	.....	12.25	.....	.....	.....		

\* Bone phosphate 50 to 60 = 23 P<sub>2</sub> O<sub>5</sub>.



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
DISTRICT OF NOVA SCOTIA—							
1911.							
May 19	Phosphate Flour	46638	Colchester's Farmers Co-op. Assn., Truro, N.S.	5 lbs..	Nil.	Leeds Phosphate Works, Leeds, Eng.	Register 258....
" 19	Complete Stock-bridge Manure	46639	J. H. Kent & Co., Truro, N.S.	5 " ..	"	Bowker Co., Boston, Mass.	.....
" 19	Swift's Lowell Ground Bone.	46640	A. J. Walker & Son, Truro, N.S.	5 " ..	"	Swift's Fertilizer Co., Boston, Mass.	.....
DISTRICT OF PRINCE EDWARD ISLAND—							
May 19	Nitrate of Soda.	46056	Auld Bros., Charlottetown.	5 lbs..	Nil.	Am. Agr. Chem. Co., New-York.	.....
" 19	Muriate of Pot-ash.	46057	" " "	5 " ..	"	German Kali Works, Stassfurt, Germany	.....
" 19	Superphosphate.	46058	Jno. H. Gill, Charlottetown.	5 " ..	"	Alex. Cross & Sons, Glasgow, Scotland.	.....
" 19	Sulphate of Pot-ash.	46059	Auld Bros., Charlottetown.	5 " ..	"	German Kali Works, Leopoldshall, Stassfurt, Germany.	.....
" 20	Potato Manure .	46060	A. Horne & Co., Charlottetown.	5 " ..	"	Swift's Lowell Fertr. Co., Boston, Mass.	.....
" 20	Ground Bone. . .	46061	" " "	5 " ..	"	" " "	.....
" 20	Sulphate of Pot-ash.	46062	Auld Bros., Charlottetown.	5 " ..	"	Thos. Vickers Sons, Ltd., Manchester, Eng.	.....
" 20	Swan's Thomas Phosphate.	46063	" " "	5 " ..	"	Swan Bros., Wigan & Stillington, Eng.	.....
" 20	Swift's Lowell Animal Brand	46064	A. Horne & Co., Charlottetown.	5 " ..	"	Swift's Lowell Fertr. Co., Boston, Mass.	.....
" 20	Bone Fertilizer..	46065	" " "	5 " ..	"	" " "	.....



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen, p.c		Phosphoric Acid, p.c.			Potash.	Moisture.		
		Total, including that of Nitric Acid or Ammonia if present.	Total calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.				

Continued.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
253	As guaranteed	.....	.....	.....	.....	.....	18	.....	.....	.....	46638	No. 258 on Inspector's invoice, which is Pot. Sulp. Incorrect identification; should be registered as 253. Up to guarantee.
	As found.....	.....	.....	.....	15.40	3.55	18.95	15.40	.....	.....		
88	As guaranteed	3.29	4	4	2	1	7	6	10	.....	46639	
	As found.....	2.86	3.48	4.40	3.90	0.50	9.85	8.35	8.73	.....		Below guarantee in potash; above in phosphoric acid. Practically is up to guarantee.
117	As guaranteed	2.46	3	.....	.....	.....	23	.....	.....	.....	46640	Up to guarantee.
	As found.....	2.24	2.72	.....	.....	.....	25.80	.....	.....	.....		

WM. A. WEEKS, INSPECTOR.

179	As guaranteed	15	18.23	.....	.....	.....	.....	.....	.....	.....	46056	Up to guarantee.
	As found.....	14.47	17.57	.....	.....	.....	.....	.....	.....	.....		
305	As guaranteed	.....	.....	.....	.....	.....	.....	.....	50	.....	46057	Registered as 305, up to guarantee.
	As found.....	.....	.....	.....	.....	.....	.....	.....	49.56	.....		
327?	As guaranteed	.....	.....	36.0	.....	.....	.....	.....	.....	.....	46058	If correctly identified as 327, then much below guarantee. Apparently some mistake in description of the brand.
	As found.....	.....	.....	17.75	.....	.....	18.00	.....	.....	.....		
306	As guaranteed	.....	.....	.....	.....	.....	.....	.....	48	.....	46059	Registered as 306, up to guarantee.
	As found.....	.....	.....	.....	.....	.....	.....	.....	48.28	.....		
114	As guaranteed	1.64	2	4	3	1	8	7	4	.....	46060	Up to guarantee.
	As found.....	1.32	1.60	4.45	4.50	0.50	9.45	8.95	3.61	.....		Registered as 114.
117	As guaranteed	2.46	3	.....	.....	.....	23	.....	.....	.....	46061	Registered as 117, up to guarantee.
	As found....	2.37	2.87	.....	.....	.....	25.25	.....	.....	.....		
324	As guaranteed	.....	.....	.....	.....	.....	16	.....	.....	.....	46062	Probably No. 324, a phosphate. Up to guarantee
	As found.....	.....	.....	16.70	3.25	0.10	19.85	19.75	.....	.....		
323?	As guaranteed	.....	.....	.....	11.2	2.8	14	11.2	.....	.....	46063	Probably No. 323 and up to guarantee.
	As found....	.....	.....	.....	10.05	3.95	14.00	10.05	.....	.....		
116	As guaranteed	2.46	3	4	4	2	10	8	4	.....	46064	Up to guarantee.
	As found....	2.65	3.22	4.75	3.65	2.05	10.45	8.40	5.17	.....		Registered as 116.
113	As guaranteed	1.64	2	4	4	1	9	8	3	.....	46065	Registered as 113. Up to guarantee.
	As found....	1.40	1.70	4.25	3.60	1.15	9	7.85	3.36	.....		

\* ( = 16.0 P<sub>2</sub> O<sub>5</sub> if Ca<sub>3</sub> (PO<sub>4</sub>)<sub>2</sub> is meant).  
14—3½



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		
DISTRICT OF NEW BRUNSWICK—							
1911.							
May	3 10% Complete Aroostook Potato	45479	The Prov. Chem. Fertr. Co., Ltd., St. John, N.-B.	3 jars.	15	Vendors.....	
"	3 Special Potato Phosphate.	45480	" " " "	3 " "	15	" " " "	
"	3 Blood, Bone and Potash.	45481	" " " "	3 " "	15	" " " "	
"	4 Swift's Lowell Bone.	45482	P. Nase & Son, St. John, N.-B.	3 " "	10	Swift's Lowell Fertr. Co., Boston, Mass.	
"	4 Swift's Animal Brand.	45483	" " " "	3 " "	10	" " " "	
"	4 Swift's Lowell Potato Phosphate.	45484	" " " "	3 " "	10	" " " "	
"	8 Thomas Phosphate Powder.	45485	Anglo-Canadian Chem. Co., St. John, N.-B.	3 " "	10	H. & E. Albert, London, Eng.	
"	8 Special Odourless Potato Phosphate.	45486	" " " "	3 " "	10	" " " "	
"	9 Stockbridge Special Complete Manure.	45487	D. J. Seely & Son, St. John, N.-B.	3 " "	10	Bowker Fertr. Co., Boston and New York.	
"	9 Bowker's 6% Potato Fertilizer.	45488	" " " "	3 " "	10	" " " "	
"	16 Bradley's Potato	45489	A.H. Vanwart, Fredericton, N.-B.	3 " "	15	The Am. Agr. Chem. Co., New York.	
"	16 Bradley's X.L. Superphosphate of Lime.	45490	" " " "	3 " "	15	" " " "	
"	17 Read's Farmers Friend.	45491	Phillips Esty & Co., Ltd., Woodstock, N.-B.	3 " "	10	" " " "	
"	17 Bradley's Eclipse Phosphate.	45492	Benn & Turney, Woodstock, N.-B.	3 " "	15	" " " "	
"	19 10% Complete Aroostook Potato.	45493	Porter Manzer, Ltd., Perth, N.-B.	3 " "	15	The Prov. Chem. Fertr. Co., Ltd., St. John, N.B.	
"	22 New England Potato Fertilizer.	45494	The Sussex Mercantile Co., Ltd., Sussex, N.-B.	3 " "	15	The New England Fertr. Co., Boston, Mass.	
"	22 New England Ground Bone.	45495	" " " "	3 " "	15	" " " "	
"	22 Farm and Garden Phosphate	45496	W. B. McKay, Ltd., Sussex, N.-B.	3 " "	10	Bowker Fertr. Co., Boston, Mass.	
"	23 Pacific Potato Special.	45497	Toombs & Son, Moncton, N.-B.	3 " "	10	The Am. Agr. Chem. Co., Boston, Mass.	
"	13 Pacific Nobsque Guano for all Crops.	45498	" " " "	3 " "	10	" " " "	



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.									No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen, p.c.		Phosphoric Acid, p.c.								
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.	Potash.	Moisture.		
65	As guaranteed	.....	4	.....	.....	.....	8	.....	10	.....	45479	Up to guarantee.
	As found.....	3.09	3.76	.....	.....	.....	8.70	.....	10.56	.....		
63	As guaranteed	.....	2.5	.....	.....	.....	8	.....	6	.....	45480	"
	As found.....	1.92	2.33	.....	.....	.....	10.00	.....	5.94	.....		
71	As guaranteed	.....	2	.....	.....	.....	7	.....	4	.....	45481	"
	As found.....	1.58	1.92	.....	.....	.....	9.15	.....	5.27	.....		
113	As guaranteed	1.64	2	4	4	1	9	8	3	.....	45482	"
	As found.....	1.43	1.74	4.05	5.10	0.50	9.65	9.15	3.37	.....		
116	As guaranteed	2.46	3	4	4	2	10	8	4	.....	45483	"
	As found.....	2.43	2.96	3.80	5.60	1.85	11.05	9.20	3.97	.....		
110	As guaranteed	2.46	3	4	4	1	9	8	6	.....	45484	"
	As found.....	2.12	2.58	6.95	1.40	0.50	8.85	8.35	5.96	.....		
1	As guaranteed	.....	.....	.....	.....	.....	15	.....	.....	.....	45485	"
	As found.....	.....	.....	.....	.....	.....	17.55	.....	.....	.....		
142	As guaranteed	2	.....	.....	.....	.....	7.00	.....	7.00	.....	45486	"
	As found.....	.....	.....	.....	.....	Trace.	8.45	8.45	7.12	.....		
88	As guaranteed	3.29	4	4	2	1	7	6	10	.....	45487	"
	As found.....	2.88	3.50	4.45	2.05	1	7.50	6.50	10	.....		
96	As guaranteed	.82	1	4	2	1	7	6	6	.....	45488	"
	As found.....	.77	.94	.....	.....	0.70	7.80	7.10	7.26	.....		
3	As guaranteed	2.06	2.5	6	2	1	9	8	3	.....	45489	"
	As found.....	1.84	2.25	3.85	4.40	1.45	9.70	8.25	2.57	.....		
2	As guaranteed	2	2.5	6	2	1	9	8	1.5	.....	45490	"
	As found.....	1.84	2.24	6.50	2.60	1.65	10.75	9.10	2.59	.....		
11	As guaranteed	3.29	4	4	2	1	7	6	1	.....	45491	"
	As found.....	3.11	3.77	2.50	.....	1.65	7.80	6.15	10.44	.....		
4	As guaranteed	1.25	6	.....	2	1	9	8	2	.....	45492	"
	As found.....	.92	1.11	6.10	.....	0.95	10.85	9.90	3.07	.....		
65	As guaranteed	.....	4	.....	.....	.....	8	.....	10	.....	45493	"
	As found.....	2.84	3.45	.....	.....	.....	9.10	.....	10.29	.....		
133	As guaranteed	1.64	2	4	3	1	8	7	4	.....	45494	"
	As found.....	1.40	1.70	5.50	0.70	2.30	8.50	6.20	4.27	.....		
139	As guaranteed	2.46	3	.....	.....	.....	23	.....	.....	.....	45495	"
	As found.....	2.06	2.49	.....	.....	.....	25.75	.....	.....	.....		
94	As guaranteed	1.65	2	6	2	1	9	8	2	.....	45496	"
	As found.....	1.89	2.30	6.90	2.90	1.55	11.35	9.80	3.18	.....		
15	As guaranteed	2.06	2.5	6	2	1	9	8	3	.....	45497	"
	As found.....	1.65	2	6.75	2.45	0.70	9.90	9.20	2.76	.....		
16	As guaranteed	1.03	1.25	6	2	1	9	8	2	.....	45398	"
	As found.....	1	1.22	6.45	3.80	2	12.25	10.25	2.27	.....		

J. C. FERGUSON, INSPECTOR.



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF QUEBEC—

1911.							
May	3	Fertilizer.....	36936	Eugene Julien, 1228 Rue St. Valier, Que.	5 lbs.. Nil	Am. Agr. Chem. Co., Boston, Mass.	.....
"	3	" .....	36937	" " .. 5 " ..	" "	" "	.....
"	3	" .....	36938	" " .. 5 " ..	" "	Leeds Phosphate Works.	.....
"	4	" .....	36939	P. T. Legaré, 287 Rue St. Paul, Que.	5 " ..	Buffalo, New York...	.....
"	4	" .....	36940	" " .. 5 " ..	" "	Am. Agr. Chem. Co.,	.....
"	4	" .....	36941	" " .. 5 " ..	" "	Michigan Carbon Works, Detroit.	.....
"	10	" .....	36942	J. B. Reneaud & Cie, Quebec.	5 " ..	British Oil and Cake, Liverpool Branch.	.....
"	11	" .....	36943	P. T. Legaré, 287 Rue St. Paul, Quebec.	5 " ..	Alex. Cross & Sons, Glasgow.	.....
"	11	" .....	36944	" " .. 5 " ..	" "	" "	.....
"	11	" .....	36945	" " .. 5 " ..	" "	" "	.....

DISTRICT OF ST. HYACINTHE—

May	17	Capelton..	38950	H. Hébert, St. Leonard Junction.	3 Jars	Nil	Capelton Chem. and Fertilizer Co., Buckingham.	.....
"	17	Victor Complete	38951	J. E. Beliveau, St. Leonard Junction.	3 " ..	"	" " ..	Bought in 1910..
"	18	Phosphate of Lime, Thomas Phosphate Flour.	38952	F. Dubuc, Nicolet ..	3 " ..	"	Leeds Phosphate Works, Leeds, England.	.....
"	23	Complete Fertilizer.	38953	L. A. Dubuc, Richelieu.	3 " ..	"	Michigan Carbon Works.	.....
"	24	Farmers' Choice.	38954	J. C. Harbec, St. Jean	3 " ..	"	Buffalo Fertilizer Co., Buffalo, N.Y.	Reg. number not marked on bags. Marked on Order only.
"	24	General Crop...	38955	" ..	3 " ..	"	" "	" "



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registered No.	Analysis of Sample.	RESULT OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Nitrogen, p.c.		Phosphoric, Acid p.c.					Potash.			Moisture.
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.				

## F. X. W. E. BÉLAND, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
....	As guaranteed										36936	Cannot be identified from information given.
	As found.....	2.03	2.47	7.25	1.45	0.65	9.35	8.70				
....	As guaranteed										36937	"
	As found.....	.98	1.19	3.50	2.15	1	6.65	5.65				
253?	As guaranteed						18				36938	Probably No. 253 and up to guarantee.
	As found.....					7.80	22.50	14.70				
....	As guaranteed										36939	Cannot be identified.
	As found.....			6.70	4.25	0.35	11.30	10.95			36940	"
....	As guaranteed											
	As found.....	1.58	1.92	7.75	2.40	1	11.15	10.15				
210?	As guaranteed	1.65	2	6	2	1	9	8	6		36941	Doubtfully identified as 210; up to guarantee.
	As found.....	2.00	2.42	6.75	2.65	0.50	9.90	9.40	9.73			
302	As guaranteed				15.40	3.85	19.25				36942	Below guarantee in phosphoric acid.
	As found.....				14.10	3.50	17.60					
....	As guaranteed										36943	Cannot be identified.
	As found.....	1.95	2.37	4.90	6.20	0.30	11.40	11.10				
399?	As guaranteed		2				8	10			36944	Doubtfully identified as 399; up to guarantee.
	As found.....	1.97	2.39	6.95	2.85	1.55	11.35	9.80	9.64			
400?	As guaranteed		4				9	5			36945	Doubtfully identified as 400; up to guarantee.
	As found..	3.51	4.26	4.90	5.95	0.70	11.55	10.85	5.60			

## J. C. ROULEAU, INSPECTOR.

337	As guaranteed			7							38950	Up to guarantee.
	As found.....			7.86			19.90					
83	As guaranteed	2					7		3		38951	Registered as No. 83, up to guarantee.
	As found.....	2.02	2.45				13.70		2.85			
253	As guaranteed						18				38952	Probably No. 253, and up to guarantee.
	As found.....						19.60					
206	As guaranteed	1.65	2	6	2	1	9	8	4		38953	Up to guarantee.
	As found.....	1.71	2.07			0.33	12.35	12.02	4.34			
55	As guaranteed		1				8	5			38954	"
	As found.....	.70	.85			1.75	11.85	10.10	5.73			
50	As guaranteed						9	3			38955	"
	As found.....					2.85	14.35	11.50	3.05			



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF ST. HYACINTHE—

1911.							
May 24	Lesages Super-phosphate.	38956	L. A. Nadeau, Ibergville P.O., Lemoine.	3 Jars	Nil	Lesage Packing and Fertilizer Co., Montreal.	.....
" 24	Lesage's Fertilizer.	38957	" " "	3 " "	"	" " "	.....
" 24	Extra High Grade Fertilizer.	38958	" " "	3 " "	"	" " "	.....
" 24	Lesage's Complete Fertilizer	38959	" " "	3 " "	"	" " "	.....

DISTRICT OF MONTREAL—

May 4	Sure Growth Manure.	40671	Wm. Ewing Co., 184 McGill St., Montreal.	3 Jars	Nil	W. A. Freeman Co., Ltd.	.....
" 4	Potato Manure..	40672	" " "	3 " "	"	" " "	.....
" 4	Tobacco Manure	40673	" " "	3 " "	"	" " "	No number on bag.
" 4	Tankage .....	40674	" " "	3 " "	"	" " "	.....
" 4	Celery and Early Vegetable Manure.	40675	" " "	3 " "	"	" " "	.....
" 6	Aroostock Complete Manure.	40676	Wm. Rennie Co, Ltd., McGill St., Montreal.	3 " "	"	The Am. Agr. Chem. Co.	.....
" 6	Crocker's Complete Manure.	40677	" " "	3 " "	"	" " "	.....
" 9	Victor.. .....	40678	Frs. Rivet, Joliette, P.Q.	3 " "	"	Capelton Chem. and Fert. Co.	.....
" 13	Ideal Wheat and Corn.	40679	Thos. Cogland, Herdman, P.Q.	3 " "	"	Buffalo Fert. Co.....	.....
" 13	Farmers' Choice	40680	" " "	3 " "	"	" " "	.....
" 13	Grass and Grain	40681	" " "	3 " "	"	Schaal Sheldon Fert. Co.	.....
" 13	Bradley B.....	40682	Wm. Anderson, Herdman, P.Q.	3 " "	"	" " "	.....
" 13	Bradley Alkaline	40683	" " "	3 " "	"	" " "	.....



## SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Nitrogen, p.c		Phosphoric Acid, p.c.					Potash.			Moisture.
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.				

J. C. ROULEAU, INSPECTOR—*Concluded.*

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
161	As guaranteed	1.65	2	...	7	1	8	....	2	.....	38956	Slightly below guarantee in nitrogen, above in phosphoric acid.
	As found.....	.89	1.08	.....	.....	3.97	12.50	8.60	2.56	.....		
162	As guaranteed	1.65	2	...	7	1	8	....	5	.....	38957	Up to guarantee.
	As found.....	1.02	1.23	.....	.....	2.50	10.45	7.95	6.69	.....		
329	As guaranteed	1.65	2	...	7	2	9	7	7	.....	38958	"
	As found.....	.98	1.19	.....	...	1.37	12.40	11.03	7.83	.....		
163	As guaranteed	1	1.25	.....	7	1	8	....	1	.....	38959	"
	As found.....	.61	.76	.....	.....	1.95	10.50	8.55	1.98	.....		

## J. J. COSTIGAN, INSPECTOR.

144	As guaranteed	2.89	3.5	5	3	.25	8.25	8	3	.....	40671	Up to guarantee.
	As found.....	2.88	3.5	6.50	1.70	2.20	10.40	8.20	4.67	.....		
145	As guaranteed	2.47	3	5	3	.25	8.25	8	5	.....	40672	"
	As found.....	2.14	2.60	3.65	4.75	2.40	10.80	8.40	6.27	.....		
149	As guaranteed	2.47	3	5	2	.25	7.25	7	5	.....	40673	Registered as 149, up to guarantee.
	As found.....	3.25	3.94	4	6.35	2.35	12.70	10.35	4.86	.....		
150	As guaranteed	4.12	5	.5	12	.5	13	12	.....	.....	40674	Up to guarantee.
	As found.....	5.76	7	3.90	6.60	4.25	14.75	10.50	...	.....		
148	As guaranteed	4.12	5	5.5	3.5	.25	9.25	9	5	.....	40675	Below guarantee in phosphoric acid. Slightly above in potash and nitrogen.
	As found.....	4.41	5.35	2.35	4.52	0.35	7.22	6.87	6.16	.....		
376	As guaranteed	2.47	3	4	2	1	7	6	10	.....	40676	Up to guarantee.
	As found.....	2.41	2.93	4.05	3.20	0.95	8.10	7.25	10.42	.....		
193	As guaranteed	.82	1	6	2	1	9	8	4	.....	40677	"
	As found.....	.82	1	5.65	5.30	0.50	11.45	10.95	5.48	.....		
83	As guaranteed	...	2	...	...	...	7	...	3	.....	40678	"
	As found.....	1.69	2.05	...	...	...	9	...	6.69	.....		
56	As guaranteed	...	2	...	...	...	...	9	5	.....	40679	"
	As found.....	1.47	1.78	...	...	1.60	12.90	11.30	5.37	.....		
55	As guaranteed	...	1	...	...	...	...	8	5	.....	40680	"
	As found.....	2.90	3.52	...	...	1.45	8.95	7.50	7.08	.....		
356	As guaranteed	1.23	1.5	6	2	1	9	8	7	.....	40681	"
	As found.....	1.43	1.73	8.40	0.15	1	9.55	8.55	6.93	.....		
259	As guaranteed	.82	1	6	2	1	9	8	4	.....	40682	"
	As found.....	.92	1.12	5.55	3.20	1.35	10.10	8.75	4.79	.....		
23	As guaranteed	...	...	9	2	1	12	11	2	.....	40683	"
	As found.....	...	...	8.50	3.15	1.85	13.50	11.65	3.94	.....		



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF MONTREAL—

1911.							
May 23	Milson's Buffalo Guano.	40685	F. N. McKough, Hemmingford, P.Q.	3 jars	Nil		
" 23	Fariners' Choice	40686	R. W. Blair, Hemmingford, P.Q.	3 "	"		
" 23	Bowker's Potash Bone.	40687	J. McCause, Hemmingford, P.Q.	3 "	"		
" 23	Bowker's Sure Crop.	40688	" " "	3 "	"		
" 30	Crocker's New General Crop.	40689	Lepaillieur freres, La-chine, P.Q.	3 "	"		
" 30	Celery and Potato Special.	40690	H. Dery, Jac. Cartier Sq., Montréal.	3 "	"		

DISTRICT OF OTTAWA

May 9	Standard . . . . .	43247	The Standard Fertilizer and Chemical Co., Smith's Falls.	3 lbs.	Nil	Vendors. . . . .	
" 10	Corn Special. . . .	43248	Capelton Chemical and Fertilizer Co., Buckingham.	3 "	"	" . . . . .	
" 10	Royal Canadian.	43249	" " "	3 "	"	" . . . . .	
" 10	Victor Potato Special.	43250	" " "	3 "	"	" . . . . .	
" 10	Victor . . . . .	43251	" " "	3 "	"	" . . . . .	
" 18	Fariners' Choice.	43252	Conklin & Thompson, Brockville.	3 "	"	Buffalo Fertilizer Co., Buffalo, N.Y.	
" 18	Read's Standard Superphosphate	43253	A. E. Cameron, Brockville.	3 "	6	Am. Agr. Chem. Co., New York.	
" 18	Read's Practical Potato Special	43254	" " "	3 "	6	" " "	
" 18	Read's High Grade Farmer's Friend.	43255	" " "	3 "	6	" " "	
" 19	Victor Lawn. . . .	43256	Graham Bros., Ottawa.	3 "	Nil	Capelton Chem. and Fertil. Co., Buckingham.	



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.							No. of Sample.	Remarks and Opinion of the Chief Analyst		
		Nitrogen, p.c.		Phosphoric Acid, p.c.			Potash.	Moisture.				
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.					Total.	Total available.

J. J. COSTIGAN, INSPECTOR—*Concluded.*

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
264	As guaranteed	82	1	6	2	1	9	8	4	...	40685	Up to guarantee.
	As found.....	85	1.03	6.15	2.50	1	9.65	8.65	6.48	.....		
55	As guaranteed	...	1	...	...	...	...	8	5	.....	40686	"
	As found.....	1.10	1.33	...	...	0.85	14.05	13.20	5.12	.....		
98	As guaranteed	82	1	4	2	1	7	6	2	.....	40687	"
	As found.....	1.26	1.53	6.65	2.05	1.05	9.75	8.70	2.47	.....		
97	As guaranteed	82	1	6	2	1	9	8	2	.....	40688	"
	As found.....	1.28	1.55	6	3.75	1.55	11.30	9.75	2.43	.....		
301	As guaranteed	82	1	6	2	1	9	8	1	.....	40689	"
	As found.....	78	.95	6.50	2.25	0.50	9.25	8.75	1.56	.....		
57	As guaranteed	...	2	...	...	...	...	8	10	.....	40690	"
	As found.. ...	1.40	1.70	7.10	...	...	11.50	...	10.85	.....		

J. A. RICKEY, INSPECTOR.

280	As guaranteed	2	2.4	8	1	5	14	9	2	.....	43247	Up to guarantee.
	As found.....	1.46	1.77	8.50	3.10	3.25	14.85	11.60	2.89	.....		
82	As guaranteed	...	1	...	...	...	8	...	3	.....	43248	"
	As found.....	1.26	1.53	...	...	...	10.15	...	4.19	.....		
84	As guaranteed	...	4	...	...	...	9	...	5	.....	43249	"
	As found.....	3.25	3.94	...	...	...	11.30	...	6.27	.....		
336	As guaranteed	...	2	...	...	...	...	6	8	.....	43250	"
	As found.....	1.65	2	...	...	2.05	8.30	6.25	9.23	.....		
83	As guaranteed	...	2	...	...	...	...	7	3	.....	43251	"
	As found.....	1.51	1.85	...	...	2	9.25	7.25	3.32	.....		
55	As guaranteed	8	1	6	2	1	9	8	5	...	43252	"
	As found.....	81	.99	3.90	4	1.10	9	7.90	5.09	...		
233	As guaranteed	82	1	6	2	1	9	8	4	.....	43253	"
	As found.....	84	1.02	7	0.95	1.10	9.05	7.95	4.24	.....		
9	As guaranteed	82	1	3	1	1	5	4	8	...	43254	"
	As found.....	87	1.05	3.35	0.75	0.80	5	4.10	8.99	.....		
11	As guaranteed	3.29	4	4	2	1	7	6	10	.....	43255	"
	As found.....	2.86	3.47	4.80	1.60	0.60	7	6.40	10.31	.....		
336	As guaranteed	...	2	...	...	...	...	6	8	.....	43256	"
	As found.....	1.40	1.70	...	...	2.20	9.55	7.35	8.36	.....		



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF KINGSTON—

1911.							
May	1 Sea Fowl Guano.	48527	Earl Spencer, Picton.	3 lbs.	10	Am. Agr. Chem. Co., Buffalo.	No tag on the bag.
"	1 High Grade Potash Compound	48528	" " "	3 " "	10	" " "	.....
"	1 Complete Manure.	48529	" " "	3 " "	10	" " "	.....
"	2 Bone and Potash	48530	Thompson & MacDonald Co., Cobourg.	3 " "	10	W. A. Freeman Co., Hamilton.	.....
"	2 Lawn Fertilizer.	48531	" " "	3 " "	10	" " "	.....

DISTRICT OF TORONTO —

May	5 Potash Compound.	47303	The Harris Abattoir Co., Ltd., Toronto.	5 lbs.	15	Vendors.....	.....
"	9 Bradley's B. D. Sea Fowl Guano.	47304	Titherington Bros., St. Catherines.	5 " "	15	Am. Agr. Chem. Co., Ltd., Buffalo, N.Y.	.....
"	9 Crocker's Best Potash Fertiliser.	47305	" " "	5 " "	15	" " "	.....
"	9 Crocker's Dissolved Phosphate	47306	The St. Catherines Cold Storage and Forwarding Co., Ltd., St. Catherines.	5 " "	15	" " "	.....
"	9 Fine Ground Bone.	47307	" " "	5 " "	15	" " "	No registration no. on bags.
"	10 Ideal Wheat and Corn.	47308	Cyrus Field, Niagara on the Lake.	5 " "	15	Buffalo Fertilizer Co., Buffalo, N.Y.	.....
"	10 Extra Phosphate and Potash.	47309	" " "	5 " "	15	" " "	.....
"	10 High Grade Special.	47310	C. E. Fisher & Sons, Queenston.	4 " "	15	Am. Agr. Chem. Co. Buffalo, N.Y.	.....
"	10 Crocker's Wheat and Corn.	47311	" " "	4 " "	15	" " "	.....
"	11 Crocker's New York Special Phosphate.	47312	Jno. Spencer, Port Colborne.	5 " "	15	" " "	.....



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.							No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Nitrogen, p.c.		Phosphoric Acid, p.c.				Potash.			Moisture.
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.				

JAS. HOGAN, INSPECTOR.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	
188	As guaranteed	2.06	2.5	6	2	1	9	8	1.5	....	48527	If correctly identified, slightly low in nitrogen but above in phosphoric acid and potash.
	As found.....	1.24	1.51	6.30	4.15	0.80	11.25	10.45	2.64			
182	As guaranteed	1.65	2	6	2	1	9	8	10	.....	48528	Practically up to guarantee.
	As found.....	.95	1.16	6.50	4.50	0.30	11.30	11.00	10.16			
394	As guaranteed	3.29	4	6	2	1	9	8	7	.....	48529	Below guarantee in nitrogen ; above in phosphoric acid and potash.
	As found.....	1.22	1.49	6.50	5.25	0.85	12.60	11.75	8.28			
147	As guaranteed	1.65	2	5.5	3.5	.25	9.25	9	6	.....	48530	Registered as No. 147—up to guarantee.
	As found.....	2.62	3.17	1.10	7.65	1.70	9.45	8.75	9.64			
157	As guaranteed	2.47	3	5.5	3.5	.25	9.25	9	4	.....	48531	Registered as No. 157—up to guarantee.
	As found.....	2.59	3.15	4.30	5.40	3.05	12.75	9.70	2.39			

H. J. DAGER, INSPECTOR.

292	As guaranteed	2	2.4	...	...	...	11	8	10	...	47303	Up to guarantee.
	As found.....	2.88	3.50	.....	.....	2.05	11	8.95	9.46	.....		
188	As guaranteed	2.06	2.5	6	2	1	9	8	1.5	.....	47304	"
	As found.....	1.94	2.36	6.90	3.25	0.75	10.90	10.15	2.43	.....		
194	As guaranteed	1.65	2	6	2	1	9	8	10	.....	47305	"
	As found.....	1.35	1.64	6.70	3.75	1.30	10.75	10.45	9.90	.....		
312	As guaranteed	.....	.....	12	2	1	15	14	.....	.....	47306	"
	As found.....	.....	.....	11.50	4.60	3.35	19.45	16.10	.....	.....		
238	As guaranteed	2.47	3	.....	.....	...	22.88	.....	.....	.....	47307	Registered as 238
	As found.....	2.52	3.06	.....	.....	.....	23.35	.....	.....	.....		
56	As guaranteed	..	2	.....	.....	.....	9	5	.....	.....	47308	"
	As found. ....	1.24	1.51	.....	.....	1.90	11.85	9.95	6.54	.....		
52	As guaranteed	.....	.....	.....	.....	.....	10	8	.....	.....	47309	"
	As found.....	.....	.....	.....	.....	2.05	13.65	11.60	8.49	.....		
381	As guaranteed	1.65	2	6	2	1	9	8	4	.....	47310	"
	As found.....	1.51	1.85	6.90	3.10	0.40	10.40	10	4.54	.....		
195	As guaranteed	2.06	2.5	6	2	1	9	8	1.5	.....	47311	"
	As found.....	2.10	2.55	6.75	2.65	1.15	10.55	9.40	2.14	.....		
192	As guaranteed	.....	.....	8	2	1	11	10	8	.....	47312	"
	As found.....	.....	.....	7.95	1.95	1.85	11.75	9.90	9.01	.....		



Date of Collection.	Designation.	No. of Samples.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF TORONTO—

1911.							
May 11	Celery and Potato Special.	47313	J. E. Barrick, Port Colborne.	5 liv..	15	Buffalo Fertilizer Co., Ltd., Buffalo, N.Y.	.....
" 12	High Grade Manure.	47314	B. L. Edgecombe, Dunnville.	5 " ..	15	" "	.....
" 12	Vegetable and Potato.	47315	" "	5 " ..	15	" "	.....
" 12	Bradley's B. D. Sea Fowl Guano.	47316	Chas. H. Weaver, Dunnville.	5 " ..	15	Am. Agr. Chem. Co., Buffalo, N.Y.	.....
" 13	Sure Growth....	47317	W. A. Freeman Fertilizer Co., Ltd., Hamilton.	5 " ..	15	Vendors....	.....
" 13	Tobacco Manure	47318	W. A. Freeman Fer. Co., Ltd., Hamilton.	5 " ..	15	Vendors	.....
" 16	H Brand. Bone, Blood & Flesh.	47319	W. Harris & Co., Toronto.	5 " ..	15	"	.....
" 18	Fine Steamed Bone.	47320	The Wm. Davies & Co., Ltd, Toronto.	5 " ..	15	"	.....
" 18	General Vegetable and Market Garden.	47321	" " " " " "	5 " ..	15	"	.....
" 18	Harab Cereal, No. 6.	47322	The Harris Abattoir Co., Ltd., Toronto.	5 " ..	15	"	.....

DISTRICT OF LONDON—

May 15	Celery and Potato Special.	48052	G. Carter, Son & Co., St. Marys.	3 Jars	Nil.	Buffalo Fertilizer Co., Buffalo.	.....
" 15	Ideal.....	48053	" " " "	3 " ..	"	" " " "	.....
" 15	Extra Phosphate Special.	48054	" " " "	3 " ..	"	" " " "	.....
" 15	Farmers' Choice.	48055	" " " "	3 " ..	"	" " " "	.....
" 16	Bone Meal.....	48056	Jno. A. Andrew, Stratford.	3 " ..	15	W. A. Freeman, Hamilton.	.....
" 16	Celery and Potato Fertilizer.	48063	J. G. Eidt, Berlin...	3 " ..	10	Buffalo Fertilizer Co., Buffalo.	.....
" 16	Potato Manure..	48064	" " " "	3 " ..	10	W. A. Freeman Co., Hamilton. See label on package for Dept.	.....
" 17	Bone Meal	48073	Struthers & Church, Galt.	3 " ..	15	" " " "	.....



## SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.									No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Nitrogen, p.c.		Phosphoric Acid, p.c.					Potash.	Moisture.		
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.				
Concluded.												
		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
57	As guaranteed	.....	2	.....	.....	.....	.....	8	10	.....	47313	Up to guarantee.
	As found.....	1·22	1·48	.....	.....	0·65	8·55	7·90	12·42	.....		
60	As guaranteed	.....	4	.....	.....	.....	.....	7	10	.....	47314	"
	As found.....	2·77	3·36	.....	.....	0·20	7·95	7·75	11·10	.....		
58	As guaranteed	.....	3	.....	.....	.....	.....	8	7	.....	47315	"
	As found... ..	2·62	3·18	.....	.....	0·55	9·35	8·80	8·14	.....		
188	As guaranteed	2·06	2·5	6	2	1	9	8	1·5	.....	47316	"
	As found.....	1·59	1·94	7·05	2·10	1·20	10·35	9·15	1·81	.....		
144	As guaranteed	2·89	3·5	5	3	0·25	8·25	8	3	.....	47317	"
	As found.....	2·21	2·68	4·50	5·35	1·85	10·70	9·85	3·49	.....		
149	As guaranteed	2·47	3	5	2	·25	7·25	7	5	.....	47318	"
	As found.....	2·19	2·66	7·50	3·40	0·30	11·20	10·90	9·60	.....		
285	As guaranteed	7·15	8·69	0·67	3·90	2·74	7·31	4·57	.....	.....	47319	"
	As found.....	6·62	8·04	0·50	5·30	1·45	7·25	5·80	.....	.....		
366	As guaranteed	4·93	6	.....	.....	.....	22·0	.....	.....	.....	47320	Below guarantee in total phosphoric acid.
	As found.....	5·60	6·80	.....	.....	.....	17·25	.....	.....	.....		
362	As guaranteed	4·11	5	1	6	2	9	7	5	.....	47321	Up to guarantee
	As found.....	3·61	4·39	0·50	7·10	4·35	11·95	7·60	4·73	.....		
291	As guaranteed	2	2·4	.....	.....	.....	12·5	9	3	.....	47322	Low in phosphoric acid, but high in nitrogen. Some doubt in identification.
	As found.....	3·58	4·35	...	.....	4·00	9·02	5·02	3·66	.....		

JNO. TALBOT, ACTING INSPECTOR.

57	As guaranteed	.....	2	.....	.....	.....	.....	8	10	.....	48052	Up to guarantee.
	As found.....	1·69	2·05	.....	.....	1·90	9·40	7·50	9·50	.....		
56	As guaranteed	.....	2	.....	.....	.....	.....	9	5	.....	48053	"
	As found.....	1·46	1·78	.....	.....	1·85	10·70	8·85	4·57	.....		
52	As guaranteed	.....	.....	.....	.....	.....	.....	10	8	.....	48054	Practically up to guarantee.
	As found..	.....	.....	.....	.....	2·30	11·20	8·90	8·20	.....		
55	As guaranteed	.....	1	.....	.....	.....	.....	8	5	.....	48055	Up to guarantee.
	As found.....	1·05	1·27	3·50	.....	1·90	10·15	8·35	4·56	.....		
146	As guaranteed	2·47	3	.....	26	1	21·0	20	.....	.....	48056	Below guarantee in available phosphoric acid
	As found..	3·71	4·51	.....	8·80	13·02	21·80	8·80	.....	.....		
57	As guaranteed	.....	2	.....	.....	.....	.....	8	10	.....	48063	Slightly below guarantee in potash.
	As found.....	1·56	1·90	.....	.....	1·45	8·70	7·25	8·91	.....		
145	As guaranteed	2·47	3	5	3	·25	8·25	8	5	.....	48064	Up to guarantee.
	As found.....	3·24	3·93	3·15	9·45	0·95	13·55	12·60	5·98	.....		
157	As guaranteed	2·47	3	5·5	3·5	·25	9·25	9	4	.....	48073	"
	As found.....	3·48	4·23	6·75	5·45	0·10	12·30	12·20	3·53	.....		



Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.
				Quantity.	Cents.		

DISTRICT OF WINDSOR—

1911.							
May 10	Sure Growth....	48029	Saml. May, Windsor, Ont.	3 jars.	13	W. A. Freeman Co., Hamilton.	
" 10	Lawn Fertilizer.	48030	" " "	3 " "	13	" " "	
" 11	Homestead High Grade.	48031	Jas. D. Soutar, Chatham, Ont.	3 " "	Nil	Michigan Carbon Works, Detroit, Mich.	
" 11	Homestead Special Beet Fertr.	48032	" " "	3 " "	"	" " "	
" 11	Ideal Wheat and Corn.	48033	" " "	3 " "	"	Buffalo Fertr. Co., Buffalo, N.-Y.	
" 11	Tobacco Manure	48034	Saml. Glenn & Son, Chatham, Ont.	3 " "	"	W. A. Freeman Co., Hamilton.	
" 12	Bone Meal.....	48036	Geo. Kirk, Woodstock, Ont.	3 " "	10	" " "	
" 12	Crocker's Best Potash.	48047	McIntosh Coal Co., Woodstock, Ont.	3 " "	Nil	Am. Agr. Chem. Co., Buffalo, N.-Y.	
" 12	Special Phosphate.	48049	" " "	3 " "	"	" " "	

DISTRICT OF VANCOUVER—

						Manufacturer.	Furnisher...	
May 23	Bone Meal.....	38195	Johnstone's Nursery, Westminister Road, Vanc.	5 lb ..	25	Portland Seed Co.	Brown Bros., Vanc.	Not reg. ....
" 23	" .....	38196	A. R. MacDougall, Westminister Road, Vanc.	5 " ..	25	Lilly & Co., Seattle.	M. J. Henry, Vanc.	" ....
" 23	Tankage .....	38197	Brown Bros., 21st Ave., Mt. Pleasant	6 " ..	Nil	P. Burns, Vanc.	Brackman-Ker, Vanc.	" ...
" 23	Blood.....	38198	" " "	6 " ..	"	" ..	" ..	" ....
" 23	Bone Meal.....	38199	Brackman-Ker Milling Co., Vanc.	5 " ..	25	Pacific Whaling Stn., Victoria.		Sample taken from bin. Could not say if tag carried reg. number.
" 23	Beef Scraps.....	38200	" " "	5 " ..	30	Swift & Co., Chicago.		No. reg. No.



## SESSIONAL PAPER No. 14

## FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Nitrogen, p.c.		Phosphoric Acid, p.c.					Potash.			Moisture.
		Total, including that of Nitric Acid or Ammonia if present.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.				

## JNO. TALBOT, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
144	As guaranteed	2.89	3.5	5	3	.25	8.25	8	3	.....	48029	Up to guarantee.
	As found.....	2.61	2.17	4	5.45	1.40	10.85	9.45	2.89	.....		
157	As guaranteed	2.47	3	5.5	3.5	.25	9.25	9	4	.....	48030	Slightly below in nitrogen, but above in other constituents.
	As found.....	1.57	1.90	6.55	3.95	0.25	10.75	10.50	4.73	.....		
209	As guaranteed	1.65	2	6	2	1	9	8	5	.....	48031	Up to guarantee.
	As found.....	1.55	1.88	6.30	4.15	0.80	11.25	10.45	5.56	.....		
208	As guaranteed	1.65	2	6	2	1	9	8	5	.....	48032	"
	As found.....	1.58	1.92	6.30	1.55	1.60	9.45	7.85	6.45	.....		
56	As guaranteed	.....	2	.....	.....	.....	.....	9	5	.....	48033	Practically up to guarantee.
	As found.....	.87	1.06	.....	.....	1.20	11.85	10.65	6.14	.....		
149	As guaranteed	2.47	3	5	2	.25	7.25	7	5	...	48034	Up to guarantee.
	As found.....	2.54	3.09	3	4.85	1	8.85	7.85	5.37	...		
146	As guaranteed	2.47	3	.....	20	1	21	20	.....	.....	48036	"
	As found.....	3.36	4.08	.....	.....	7.30	23.15	15.85	.....	.....		
191	As guaranteed	1.65	2	6	2	1	9	8	10	.....	48047	"
	As found.....	1.14	1.39	3.70	3.20	2.15	9.05	6.90	10.20	.....		
192	As guaranteed	.....	.....	8	2	1	11	10	8	.....	48049	"
	As found.....	.....	.....	9.70	1.55	0.50	11.75	11.25	8.34	.....		

## J. F. POWER, INSPECTOR.

....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	38195	Not registered.
	As found.....	2.49	3.02	.....	.....	.....	26.50	.....	.....	.....		
297	As guaranteed	3	.....	.....	17	5	22	.....	.....	.....	38196	Registered as 297. Up to guarantee.
	As found.....	3.52	4.27	.....	.....	.....	28.15	.....	.....	.....		
440	As guaranteed	7.59	9.49	Trace.	5.87	2.91	8.78	5.87	.....	.....	38197	Registered as 440. Nitrogen low; phosphoric acid high.
	As found.....	5.75	6.89	0.75	9.28	6.72	16.75	10.03	.....	.....		
439	As guaranteed	10.74	13.04	.....	3.00	.77	3.77	3.00	.....	.....	38198	Registered as 439. Up to guarantee.
	As found.....	12.22	14.84	.....	7.84	2.16	9.00	7.84	.....	.....		
355	As guaranteed	.....	3.5	.....	.....	.....	26	.....	.....	.....	38199	Registered as 355. Up to guarantee.
	As found.....	3.42	4.15	.....	.....	.....	26.50	.....	.....	.....		
....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	38200	Not registered.
	As found.....	.....	.....	.....	.....	.....	13.90	.....	.....	.....		



3 GEORGE V., A. 1913  
BULLETIN No. 227—

Date of Collection.	Designation.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report.	
				Quantity.	Cents.			
DISTRICT OF VANCOUVER—								
1911.						Mfr.	Fur.	
May 23	Bone Meal.....	38201	Rennies Seed Store, Granville Street, Vancouver.	6 lbs..	25	C. H. Lilly Co., Seattle.	M. J. Henry Co., Vanc.	Noreg. number.
" 23	Fertilizer.....	38202	" " " " " "	3pkts.	90	Wm. Rennie, Toronto.		
" 23	" " " " " "	38203	Royal Nurseries, Granville Street, Vancouver.	6 lbs..	30		Brackman-Ker.	
" 23	" " " " " "	38204	" " " " " "	6 " "	25	Victoria Chem. Co., Vict., B.C.		
DISTRICT OF VICTORIA—								
June 9	Bone Meal. ....	47601	The Brackman-Ker Milling Co., Ltd., Victoria, B.C.	5 lbs..	10	Pacific Whaling Co., Ltd., Vancouver.		
" 9	Blood Meal.....	47602	" " " " " "	5 " "	20	P. Burns & Co., Ltd., Vancouver.		
" 9	Whale Guano...	47603	" " " " " "	5 " "	15	Pac. Whaling Co., Ltd., Vancouver.		
" 15	Fertilizer A.....	47604	Victoria Chem. Co., Ltd., Victoria, B.C.	5 " "	25	Vendors...		
" 15	Fertilizer B....	47605	" " " " " "	5 " "	25	" " " " " "		
" 15	Fertilizer C....	47606	" " " " " "	5 " "	25	" " " " " "		
" 15	Fertilizer D....	47607	" " " " " "	5 " "	25	" " " " " "		
" 15	Nitrate of Soda.	47608	" " " " " "	5 " "	25		Parrott & Co. San Francisco, Cal.	
" 15	Superphosphate of Lime.	47609	" " " " " "	5 " "	25	Vendors...		
" 19	Bone and Blood Fertilizer.	47629	Fredr. Savory, Victoria, B.C.	5 " "	25	Frye, Bruhne & Co., Seattle, Wash.		



SESSIONAL PAPER No. 14  
FERTILIZERS AS SOLD.

Registration No.	Analysis of Sample.	RESULTS OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
		Nitrogen, p.c.		Phosphoric Acid, p.c.					Potash.			Moisture.
		Total, including that of Nitric Acid or Ammonia.	Total, calculated as Ammonia.	Soluble in Water.	Reverted or Citrate Soluble.	Insoluble.	Total.	Total available.				

Concluded.

		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	As guaranteed	3	.....	.....	17	5	22	.....	.....	.....	38201	Registered as
	As found.....	3·10	3·76	.....	.....	.....	20·50	.....	.....	.....		297. Slightly
276	As guaranteed	2·00	2·5	8	.....	.....	.....	.....	2	.....	38202	below guaran-
	As found.....	1·52	1·85	12·35	.....	.....	18·70	.....	4·90	.....		tee in total phos-
355	As guaranteed	.....	3·5	.....	.....	.....	26	.....	.....	.....	38203	phoric acid.
	As found.....	22	27	11·93	3·62	0·40	15·95	15·45	.....	.....		Up to guarantee.
80	As guaranteed	.....	.....	.....	.....	.....	16	.....	.....	.....	38204	Much below
	As found.....	.....	.....	.....	.....	.....	26·50	.....	.....	.....		guarantee in
												phosphoric acid
												and nitrogen.
												May be incor-
												rectly described.
												Much above
												guarantee in
												phosphoric acid.
												Perhaps this
												and the preced-
												ing are reversed.
												Reported here
												as given on in-
												spectors invoice.

D. O'SULLIVAN, INSPECTOR.

355	As guaranteed	.....	3·5	.....	.....	.....	26	.....	.....	.....	47601	Up to guarantee.
	As found.....	2·85	3·47	.....	.....	.....	26·70	.....	.....	.....		
.....	As guaranteed	10·74	13·04	.....	3	·77	3·77	3	.....	.....	47602	Registered as
	As found.....	12·20	14·82	trace.	3·70	0·10	3·80	3·70	.....	.....		439. Up to
.....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	47603	guarantee.
	As found.....	.....	.....	.....	.....	.....	3·10	.....	3·31	.....		Not registered.
73	As guaranteed	4	.....	.....	.....	.....	10	.....	7	.....	47604	Slightly below
	As found.....	2·84	3·45	.....	.....	.....	13·25	.....	7·87	.....		guarantee in
												nitrogen.
74	As guaranteed	3·5	.....	.....	.....	.....	10	.....	11	.....	47605	Above in phos-
	As found.....	3·30	4·01	.....	.....	.....	10·25	.....	8·78	.....		phoric acid.
75	As guaranteed	.....	.....	.....	.....	.....	12·5	.....	11	.....	47606	Below guarantee
	As found.....	.....	.....	.....	.....	.....	15·55	.....	10·63	.....		in potash.
76	As guaranteed	2·5	.....	.....	.....	.....	10	.....	11	.....	47607	Up to guarantee.
	As found.....	2·20	2·67	.....	.....	.....	14·85	.....	12·55	.....		
77	As guaranteed	15·5	.....	.....	.....	.....	.....	.....	.....	.....	47608	"
	As found.....	14·78	17·95	.....	.....	.....	.....	.....	.....	.....		"
80	As guaranteed	.....	.....	.....	.....	.....	16	.....	.....	.....	47609	"
	As found.....	.....	.....	.....	.....	.....	18·55	.....	.....	.....		
.....	As guaranteed	.....	.....	.....	.....	.....	.....	.....	.....	.....	47629	Not registered.
	As found.....	.....	.....	.....	.....	.....	20·65	.....	.....	.....		



## APPENDIX D.

## BULLETIN No. 228—A STUDY OF MAPLE SYRUP.

OTTAWA, October 18, 1911.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a report upon 456 samples of maple syrup, and would preface the report as follows:—

Standards for the judging of maple sugar and maple syrup were promulgated by order in council under section 26 of the Adulteration Act, on March 22 of this year; becoming legally effective on April 25. The following is a synopsis of these standards as applied to maple syrup.

‘Maple syrup is syrup, made by evaporation of maple sap, or by the solution of maple concrete in water; and contains not more than thirty-five (35) per cent of water. The total ash, reckoned as a percentage on the dry matter of the syrup, shall not be less than 0·5 (five-tenths of one per cent). The malic acid, determined in prescribed manner, shall not be less than 0·4 (four-tenths of one per cent), reckoned as a percentage on the dry solids. The lead subacetate number, determined as prescribed, shall not be less than 2·2 (two and two-tenths).’

These limits were fixed as a result of large experience upon commercial samples of maple syrup. The data referred to will be found in Bulletins 45, 102, 120, 141, 155, 157 and 214, issued from these laboratories, and cover more than one thousand samples. Most of these are market syrup, obtained in the usual way by our inspectors; but many of them carried trustworthy guarantees of genuineness, and a considerable number were made under the direct supervision of a member of our staff.

It was believed that the standard limits enacted as described were so written as to make it impossible that a sample of genuine maple syrup made entirely from maple sap, could be judged other than genuine. Samples more or less sophisticated might escape detection; but no danger of stamping a genuine maple syrup as adulterated, was thought to be possible.

Nevertheless disquieting rumours found currency, to the effect that maple syrup samples of undoubted genuineness were being called in question, under our standards; and the matter appeared to be sufficiently serious to justify investigation.



## SESSIONAL PAPER No. 14

With this end in view, I caused a large number of requests to be sent to makers of maple syrup, asking them to furnish me with small samples of syrup, of their own manufacture, and accompanied by a declaration of genuineness, in the following form:—

## DECLARATION.

I have learned that one of the greatest difficulties found in the legal protection of the genuine maple syrup and sugar industry is due to insufficient knowledge of the limits of variability which may be found in the genuine maple products themselves.

For the purpose of assisting in the acquisition of necessary data, I am sending this sample to the Department of Inland Revenue at Ottawa, and I hereby certify that this maple syrup has been made by myself and is known to me to be genuine, and is entirely the product of the maple tree.

Signed.. . . . .  
Post Office Address.. . . . .

As a result of this appeal, I received the samples now reported; and I desire here to express my gratitude to the senders, and my appreciation of their willingness to supply full information as to the modes of working and kindred matters.

Since the object of this investigation is the ascertaining of fullest knowledge regarding the character of maple syrup, I have felt it desirable to avail myself of every source of authentic information on the subject; and I have especially to acknowledge the valuable data presented in Bulletin No. 134 of the Bureau of Chemistry, Washington, D.C.

A detailed study of the results of analysis is subjoined; and I may merely add here that the contention regarding present standards for maple products, that they exact a higher lead acetate number than is afforded by some genuine maple syrups, is substantiated. Of 456 samples examined by the authorized method, 31 samples, most if not all, of undoubted genuineness, fail to reach the legal requirements. When these samples are worked for lead number by the Winton method, 15 samples are still found below legal requirements, the equivalent standard by the Winton method being considered.

Under these conditions it is apparent that our standards must be rewritten, since it goes without saying that there must be no possibility of penalizing a genuine article.

I would therefore respectfully recommend that the maple products standards of March 2, be revised, as follows:—and may add that in this recommendation, I am supported by Dr. W. H. Ellis and Dr. J. T. Donald, the other members of your advisory board.

## PROPOSED STANDARDS FOR MAPLE PRODUCTS.

## MAPLE SUGAR.

*Maple Sugar* is the solid product resulting from the evaporation of maple sap, or of maple syrup, and contains not more than ten (10) per cent of water. It yields not less than six-tenths (0.6) of one per cent of ash, reckoned on the dry matter of the sugar, when incinerated in such a way as to assure the earths being present as salts, and not as oxides; and not less than twelve one-hundredths (0.12) of one per cent of ash insoluble in water, employed as described below. It yields not less than three-tenths (0.3) per cent of malic acid, reckoned on the dry matter, when worked as described below. It yields a *lead number* not less than one seven-tenths (1.7), when worked by the Canadian method, nor less than one and two-tenths (1.2), when worked by the Winton method, as described below.



## MAPLE SYRUP.

*Maple Syrup* is syrup made by the evaporation of maple sap, or by the solution of maple concrete in water; and contains not more than 35 per cent of water. The dry substance of maple syrup shall meet all the above standards for maple sugar.

## METHODS OF WORKING.

*Water*, in maple sugar, shall be determined by heating to 100° C. 5 grammes of the finely powdered sugar, spread upon a watch glass, to constant weight. The loss of weight shall be reckoned as water.

*Water* in maple syrup shall be determined by drying 5 grammes of the syrup, on asbestos fibre or in admixture with sand, to constant weight, at a temperature not exceeding 100° C. The loss of weight shall be reckoned as water.

*Total ash*, in both maple sugar and maple syrup, shall be determined by gentle ignition of 5 grammes in platinum, to the point of incipient charring, after which ignition to constant weight shall be completed in a muffle, at as low a temperature as possible. The resultant ash is then treated with ammonium carbonate in solution, dried and gently ignited, when the weight should remain unchanged.

*Insoluble ash* is determined by treating the total ash with 40 cc. of hot water, and gently boiling for two minutes. The contents of the dish are then thrown upon a small ashless filter, and washed with hot water till the total filtrate amounts to 100 cc.

*Malic acid*.—Six and seven-tenths (6.7) grammes of the dry sugar, or its equivalent amount in syrup, is weighed into a 200 cc. beaker and water added to make a volume of 20 cc. The solution is made slightly alkaline with ammonia, 1 cc. of a ten per cent solution of calcium chloride is added; then 60 cc. of 95 per cent alcohol. The beaker is covered with a watch glass and heated for one-half hour on a water bath, when the flame is turned off and the beaker left to stand over night. The material in the beaker is then filtered through a good quality filter paper, the precipitate washed with hot 75 per cent alcohol to freedom soluble calcium salt, dried and ignited. From 15 to 20 cc. of tenth normal hydrochloric acid is added to the ignited residue, the lime thoroughly dissolved by careful boiling, and the excess of acid titrated with normal sodium hydroxide, using methyl orange as an indicator. One-tenth of the number of cubic centimeters of acid neutralized express the result, which for the present will be called 'Malic Acid Value.'

*Lead Number, Canadian Method.*

Five grammes of the dry sugar, or its equivalent in syrup is dissolved in water, to a volume of 20 cc. Two (2) cc's of a solution of subacetate of lead is added, and the solutions thoroughly mixed. After standing for two (2) hours, the precipitate is filtered off, using a Gooch crucible or a sugar tube packed with asbestos, and washed four or five times with hot water, using the suction pump, dried and weighed. The weight of the dry precipitate in grammes is multiplied by 20. The product is the *lead subacetate number*.

Mode of preparation of solution of subacetate of lead, as follows:—

Boil for half an hour 430 grammes of normal lead acetate and 130 grammes of litharge with 1,000 cc. water. Cool the mixture, allow to settle, and dilute the supernatant liquid to 1.26 specific gravity.

*Winton method.*

Twenty-five grammes (25) of dry sugar, or its equivalent in syrup is transferred to a 100 cc. flask with water. Add 25 cc. of the standard lead acetate solution and shake; fill to the mark, shake and allow to stand at least three hours before filtering. From the clear filtrate, pipette off 10 cc. to a 250 cc. beaker, add 40 cc. of water and 1 cc. of concentrated sulphuric acid; shake and add 100 cc. of 95 per cent alcohol. Let stand over night, filter on a tared Gooch crucible, wash with 95 per cent alcohol, dry in a water oven, and ignite over a Bunsen burner, applying the heat gradually at first.



## SESSIONAL PAPER No. 14

Cool and weigh. Subtract the increase in weight of lead sulphate from the weight of the blank. Multiply the difference by the factor 27.325. The determination of the blank is made as follows:—

Transfer 25 cc. of the standard lead acetate solution to a 100 cc. flask, add a few drops of acetic acid, and make up the whole to the mark with water. Shake, and use 10 cc. for the determination of lead, as directed in the preceding section.

NOTE.—If the maple syrup samples have undergone fermentation in any degree, the carbonic acid must be boiled off, before adding the lead acetate solution. This with either of the above methods.

2. If crystallization of sugar has taken place in maple syrup samples, this must be redissolved, by gently warming the sample, before proceeding with the analysis.

These standards for maple syrup are based essentially upon work reported, in Bulletin 229; and represent minimum values for critical data found in genuine samples of maple syrup. Commercial samples failing to reach the requirements named will be held to be illegally adulterated. But it does not follow that samples meeting these standards are necessarily genuine. Certain values possessed by the data named, in relation to each other, may be shown to be as essential to genuineness as the data themselves considered singly.

From the elementary composition of the ash, and other results of analysis, it may be possible to prove adulteration, even in samples which give lead and malic acid numbers, meeting the requirements of the standards above defined.

In submitting these revised standards for maple products. I am conscious that the lowering of the lead number and the malic acid number, rendered necessary by considerations which have been placed before you in detail, makes it quite possible for fraud to be perpetrated in the maple sugar and maple syrup industry with increasing difficulty of detection. This industry is a very important one, particularly in some sections of Canada; and it affords a source of profitable employment to the farmer at a period of the year when farm work is not otherwise pressing. For this reason, it is very desirable that the small manufacturer should be protected from the unfair competition of mixtures of cane and maple sugars, which although wholesome and desirable food substances, are not legal maple sugar or syrup.

Recognizing the difficulty of affording as perfect protection as could be wished, by inspection under the Adulteration Act, I would respectfully suggest the offer of a reward to any person able to prove the manufacture and sale of maple products which are adulterated. If a substantial penalty for adulteration of maple goods were specifically named, one moiety of it to go to the informer, in case of his making good his charges, this would, I venture to think, prove a powerful deterrent to fraudulent practices which now prevail.

I beg to recommend the publication of this report as Bulletin 228.

I have the honour to be, Sir,  
Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

## MAPLE SYRUP.

Syrups are fundamentally solutions of one or more sugars in water. Since sugar is the costly component, it is reasonable to require that a commercial syrup should contain a specified amount of sugar. Hence the necessity for fixing a legal minimum percentage of sugar, or a maximum percentage of water, or a minimum density for the syrup, or a minimum weight per gallon.

The syrup of the British Pharmacopœia may be taken as typical; and it is legal syrup by virtue of its being defined by the pharmacopœia. It is made by dissolving 5 lbs. of refined sugar in distilled water, the finished product to weigh 7½ lbs. The specific gravity is 1.330. This syrup contains 66.7 per cent by weight of sugar; and, of course, 33.3 per cent of water.



3 GEORGE V., A. 1913

In the 456 samples of syrup herein reported, the water content ranges from 25 to 50 per cent of the weight of the syrup, and is distributed as follows. The water percentage being stated to the nearest integral number:—

Percentage of Water.	Number of Samples.	Percentage of Total.
25	1	0.22
27	1	0.22
28	3	0.66
29	2	0.44
30	47	10.30
31	97	21.27
32	106	23.25
33	68	14.91
34	41	9.00
35	36	7.90
36	18	3.95
37	21	4.60
38	5	1.10
39	6	1.30
40	2	0.44
41	1	0.22
50	1	0.22
Total.. 456		

88 p.c.

More than 88 per cent of these samples fall within a 35 per cent limit for water; while more than 96 per cent of them fall within a 37 per cent limit. A thirty-five per cent limit for water corresponds to a weight of 13 lbs. 3 oz. per imperial gallon; a specific gravity of 1.320 at the ordinary temperature or to 35.6° Baumé. I have designated samples containing more than 35 per cent of water, as having water in excess, for the reason that 35 per cent of water is sufficient to keep the sugar in permanent solution, and a higher amount of water than this is inconsistent with the definition of a syrup as furnished by the British pharmacopœia, and moreover conduces to ready fermentation, unless kept sterilized. Of 395 samples of maple syrup reported, in Bulletin 134 of the Bureau of Chemistry, Washington, 1910, none containing as much as 35 per cent water showed crystallization of the sugar; and our experience in the 456 samples of Canadian syrup now reported, is to the same effect.

Such a syrup as is defined by the pharmacopœia, has the characteristic sweetness of sugar and is nearly colourless. As might be expected from its mode of preparation, it has no special flavour, and for the purpose intended by the pharmacopœia, this is an advantage. It is easily intelligible that instead of adding the refined sugar to distilled water, a syrup of proper density may be produced by concentrating a dilute solution of sugar in water. The dilute solution in question may be a natural one, as the juice of the sugar cane or the sap of the maple tree. Inspissation may be effected by evaporation of the water; or by freezing and separating the floating ice. A syrup produced in this way will differ from B. P. syrup chiefly in the fact that any substances other than sugar naturally present in the sap, will remain in the syrup, except so far as processes of manufacture have removed them. When the sap has been boiled, any components volatile at the boiling temperature will be lost. Substances rendered insoluble by concentration, may be removed by filtration or sedimentation; or, if sufficiently light to float on the syrup, they may be skimmed off. Such non-sugar components as are not removed from the syrup, by one or other method indicated, will remain in solution, and may give medicinal or aromatic or other properties to such syrups.

When the sap of the maple tree (hard or soft maple) is the material employed, and the method is one of evaporation by heat, the resultant product is *maple syrup*. This article has a higher market value than the simple syrup of the pharmacopœia; and so far as I can discover, this increased value is due to its special and agreeable flavour. Maple syrup may also be made by dissolving maple sugar in water to a proper consistency.



## SESSIONAL PAPER No. 14

Like any other manufactured product, maple syrup may be injured in process of manufacture. The sap may be carelessly collected, and many impurities introduced; or the syrup may be burned during the evaporation, producing caramelization, and a burnt taste. Failure to separate floating impurities may leave it turbid and unattractive. In all such cases we have spoiled maple syrup; but *maple syrup* nevertheless. I wish to insist upon this point; because maple syrup is made by thousands of persons who have had no technical training, who use very crude appliances, and to whom the making of maple syrup is merely an incident in the year's work. But they are, nevertheless, honest in their intention to produce a bona fide maple syrup; and it would be palpably wrong to legalize any definition of the article which could stigmatize their output as adulterated. This output may be of low grade, but it is maple syrup.

There is another class of makers of maple syrup who are punctilious in regard to collection and subsequent treatment of the sap. They prevent the introduction of foreign matters into it, avoid caramelization of the sugar, and are careful to separate matters thrown out of solution on concentrating. The final product has very little colour, and the agreeable flavour of the maple is not hidden or disguised by caramel. This product is surely maple syrup; and it would be unwarrantable to legalize any definition of the article which would fail to recognize it as such. The following conclusions appear to be justified by the above considerations:—

1. Colour is not an essential character of maple syrup.
2. Clearness is not an essential character of maple syrup.
3. *A pure maple flavour* is not an essential of maple syrup.

Colour, clearness and flavour are undoubtedly of importance in determining the commercial value of maple syrup; but they are not essential to its specific identity. And further, the use of actual maple sap, *and of nothing else*, as a raw material in the manufacture of maple syrup, is essential. No operation ostensibly having for its object the amelioration of the product, but which introduces into this product anything that did not already exist in the maple sap, is permissible, where the product is sold simply as maple syrup.

The sugar which is present in maple sap is sucrose, and is chemically and physically identical with the sucrose of sugar cane and beet root. In the natural juices of sugar cane and beet root, the sucrose is associated with other substances in solution, as is the case with sucrose in the sap of the maple tree. The difference is that these other substances, if allowed to remain in the juice while this is concentrated by evaporation to the consistency of syrup, cause the product to have a disagreeable flavour, in the cases of cane and beets, while in the case of maple sap, the characteristic flavour is pleasant, and the resultant syrup is in demand on this account. For this reason, more or less complex processes are resorted to, in the manufacture of cane and beet juices with the object of freeing the sugar from all other matters, and the sugar so obtained is usually found on the market in a highly refined state, and is indeed one of the purest food substances known, being often above 99 per cent sucrose. As such it is identical with the sucrose of maple sap; and, so far as healthfulness goes, a solution of this sugar, having proper consistency, may be added to maple syrup, with the production of a desirable table syrup. But such a mixture is not maple syrup; and it should not be sold as such. It is conceivable that, where a specially high-flavoured maple syrup is used, the mixture may possess a sufficiently distinct maple flavour to be indistinguishable by the palate, from actual maple syrup.

If imperfectly refined cane or beet sugar is employed, the characteristic impurities of cane or beet juice, will appear in the mixture, and will, naturally, interfere more or less, with the true maple flavour. Since however, as has been stated above, much maple syrup is carelessly or crudely made, a mixture of the kind indicated may find sale and, indeed, we know that such mixtures do find sale, at times.



From what has been said, the necessity of having some standard for maple syrup, independent of its sugar, its flavour, its colour or its clearness, will be apparent. Even if we knew to what the flavour of maple syrup is due, and could quantitatively determine this constituent, the great variation in the intensity of flavour recognized in genuine samples would compel us to accept a minimum amount of the flavour-giving constituent as exempting the sample from condemnation as adulterated. Such minimum could only be defined by an exhaustive analysis of so large a number of samples of real maple syrup, as should include with certainty all possible varieties of the article. As a matter of fact, the flavour-giving substances in maple syrup are not exactly known. It is probable that certain esters of malic and other acids, have most to do with maple syrup flavour. The acids in question yield calcium salts that are comparatively insoluble in dilute alcohol. Hence these acids can be determined with considerable exactitude.

The so-called *malic acid value* has been determined upon a large number of samples of presumably genuine maple syrup. Bulletin No. 134 of the Bureau of Chemistry, Washington, contains a report of work done upon 86 samples of Canadian maple syrup, obtained in Quebec, in 1909, and believed to be genuine.

The following are the results obtained:—

	Per cent.
Malic acid value from 0.30 to 0.39 .. .. .	1.2
“ “ 0.50 to 0.59 .. .. .	9.3
“ “ 0.60 to 0.69 .. .. .	10.4
“ “ 0.70 to 0.79 .. .. .	33.7
“ “ 0.80 to 0.99 .. .. .	34.9
“ “ 1.00 to 1.24 .. .. .	10.4

The same publication reports this determination upon a total of 480 samples obtained in the eastern United States and Canada, and believed to be genuine.

The percentage results are as follows:—

	Per cent.
Malic acid value from 0.00 to 0.29 .. .. .	0.2
“ “ 0.30 to 0.39 .. .. .	0.4
“ “ 0.40 to 0.49 .. .. .	2.3
“ “ 0.50 to 0.59 .. .. .	6.0
“ “ 0.60 to 0.69 .. .. .	12.3
“ “ 0.70 to 0.79 .. .. .	18.3
“ “ 0.80 to 0.99 .. .. .	34.1
“ “ 1.00 to 1.24 .. .. .	21.2
“ “ 1.25 to 1.49 .. .. .	4.8
“ “ 1.50 to 1.75 .. .. .	0.4

The tables accompanying this report give the malic acid values of 452 samples of maple syrup, each sample supplied by the maker, and accompanied by a declaration of its having been made entirely from maple sap. For purpose of comparison with the above, I submit the following synopsis of results, and may add that these have been obtained by methods of analysis, identical with those employed at Washington.

	Per cent.
Malic acid value below 0.30.. .. .	None
“ “ 0.30 to 0.39.. .. .	2.0
“ “ 0.40 to 0.49.. .. .	4.0
“ “ 0.50 to 0.59.. .. .	10.6
“ “ 0.60 to 0.69.. .. .	15.7
“ “ 0.70 to 0.79.. .. .	20.8
“ “ 0.80 to 0.99.. .. .	37.8
“ “ 1.00 to 1.16.. .. .	9.1



## SESSIONAL PAPER No. 14

A malic acid value of between 0.50 and 1.00 is found for 88 per cent of Canadian samples, analysed at Washington, for 71 per cent of samples obtained throughout Canada and the eastern United States; and for 94 per cent of Canadian samples herein reported, and furnished with a declaration of genuineness. It is safe to infer that samples giving less than 0.5 or more than 1.0 as malic acid values, are exceptional. But it must be borne in mind that individual samples, guaranteed genuine, give as low a malic acid number as 0.30; while 2 per cent of the present collection gave malic acid values below 0.4.

While the data available do not enable me to assert the fact positively, I am convinced that the sap from the soft maple produces a syrup yielding a lower malic acid number than that from the hard maple (rock maple). In many cases the sugar orchards contain both hard and soft maple trees; and I think it generally true that the hard maple predominates in the province of Quebec; and the soft maple in Ontario, particularly in western Ontario.

When the basic acetate of lead is added in excess to a solution of maple syrup (or sugar) malate of lead is thrown out of solution, together with other organic matters of varied character. If a lead solution of definite strength is employed, and the operation carried out under strictly defined conditions, this precipitate is found to be fairly constant in amount. Two recognized methods of making the test are widely used, and are as follows:—

*Canadian method.*—Five grammes (5) of sugar (or its equivalent in syrup) is dissolved in water, to a volume of 20 cc. Two (2) cc's of a solution of subacetate of lead is added, and the solutions thoroughly mixed. After standing for two (2) hours, the precipitate is filtered off, using a Gooch crucible or a sugar tube packed with asbestos, and washed four or five times with hot water, using the suction pump, dried and weighed. The weight of the dried precipitate in grammes is multiplied by 22.22.<sup>1</sup> The product is the *lead subacetate number*.

Mode of preparation of solution of subacetate of lead, as follows:—

Boil for half an hour 430 grammes of normal lead acetate and 130 grammes of litharge with 1,000 cc. water. Cool the mixture, allow to settle, and dilute the supernatant liquid to 1.26 specific gravity.

*Winton method.*—Weigh 25 grammes of the sample and transfer to a 100 cc. flask with water.<sup>2</sup> Add 25 cc. of the standard lead acetate solution and shake; fill to the mark, shake, and allow to stand at least three hours before filtering. From the clear filtrate, pipette off 10 cc. to a 250 cc. beaker, add 40 cc. of water and 1 cc. of concentrated sulphuric acid; shake and add 100 cc. of 95 per cent alcohol. Let stand overnight, filter on a tared Gooch crucible, wash with 95 per cent alcohol, dry in a water oven, and ignite over a Bunsen burner, applying the heat gradually at first. Cool and weigh. Subtract the increase weight of lead sulphate from the weight of the blank and multiply by the factor 27.325. The determination of the blank is made as follows:—

Transfer 25 cc. of the standard lead acetate solution to a 100 cc. flask, add a few drops of acetic acid, and make up the whole to the mark with water. Shake, and use 10 cc. for the determination of lead, as directed in the preceding section, and multiply by the factor 27.325.

3

$$\frac{\text{PbSO}_4 \times .6829 \times 100}{2.5} = \text{PbSO}_4 \times 27.325.$$

While the lead numbers found by the two methods are not identical they are comparable, and yield practically the same information regarding the sample, as will be seen in the sequel. The Canadian method has the advantage of requiring less time

<sup>1</sup>On the assumption that maple sugar contains 10 per cent water.

<sup>2</sup>With either of these methods, if fermentation has taken place, the carbonic acid must be boiled off before adding the lead solution.

<sup>3</sup>The resultant is weight of metallic lead corresponding to 100 grammes of the sample. The proposed Canadian Standard is based on the dry solids of the sample.



and labour, and is therefore beter suited to police work. At best both methods must be regarded as empirical, and exact duplication of results is not to be expected with either.

With every empirical method two sources of error must be recognized and allowed for, viz.: That due to our ignorance of the more or less variable substances estimated, and that due to the personality of the operator. In any attempt to interpret into actual operation a written description of such a method as is in question, it will be found that no two operators will secure absolutely concordant results. In order to ascertain the limits of unavoidable difference in result, the following samples were worked in duplicate, by different persons, the samples being so designated that the analyst could not know what actual sample he had in hand. The columns headed 1 and 2 give check results in the hands of the same analyst; columns headed 3 and 4 give the mean results as found by different analysts, working upon the same sample, without knowledge of the fact. The differences following each pair of columns headed 1 and 2 give the magnitude of the first sort of error above referred to; while the *difference of means*, gives the magnitude of the second source of error. The work was done with every possible care, by skilled analysts.

Lead Number (Canadian Method).

STUDY of Errors involved.

Sample.	First Operator.				Second Operator.				Difference of Means.
	1	2	Diff.	Mean.	1	2	Diff.	Mean.	
A.....	1.72	1.80	0.08	1.76	1.68	1.67	0.01	1.67	0.09
B.....	2.42	2.52	0.10	2.47	2.46	2.32	0.14	2.39	0.08
C.....	2.02	2.12	0.10	2.07	1.95	2.29	0.34	2.12	0.05
D.....	2.36	2.52	0.16	2.44	2.50	2.52	0.02	2.51	0.07
E.....	1.70	1.68	0.02	1.69	1.96	1.84	0.12	1.90	0.21
F.....	1.46	1.40	0.06	1.43	1.20	1.29	0.09	1.24	0.19
G.....	1.72	1.52	0.20	1.62	1.70	1.73	0.03	1.72	0.10
H.....	1.94	1.94	0.00	1.94	2.14	2.22	0.08	2.18	0.24
K.....	1.70	1.96	0.26	1.83	2.14	2.06	0.08	2.10	0.27
L.....	2.00	2.00	0.00	2.00	1.84	1.82	0.02	1.83	0.17
M.....				1.83				1.78	0.05
N.....				2.11				1.92	0.19
O.....				1.89				1.85	0.04
		Average 0.10				Average 0.09			0.13

NOTE.—The above results are stated on the weight of the syrup; not, as usual, on the weight of dry sugar contained therein.

From this study it is apparent that the results of work must not be interpreted closer than 0.20. That is to say, if we require a legal minimum lead precipitate number of 2.00, then this requirement must be held to be fulfilled if analysis gives 1.80; since an error amounting to the difference between the number found and that required inheres in the method of working.

When the Winton method of determining the basic lead number is employed, the results for duplicate estimations are decidedly closer. The following table gives duplicate results by both methods, and illustrates at once the amount of error inherent in each method, and the relation of the indications obtained by each.



Basic Lead Numbers.

COMPARISON of Canadian and Winton Methods.

Sample.	Canadian.			Winton.			Difference of Means.
	1	2	Mean.	1	2	Mean.	
1 .....	3.65	3.50	3.57	2.35	2.42	2.38	1.19
2 .....	2.89	3.08	2.99	2.34	2.29	2.31	0.68
3 .....	3.41	3.41	3.41	2.29	2.34	2.31	1.10
4 .....	3.35	3.67	3.51	2.36	2.36	2.36	1.15
5 .....	3.29	3.02	3.16	2.29	2.29	2.29	0.87
6 .....	2.95	3.33	3.14	2.23	2.33	2.28	0.86
7 .....	2.89	3.23	3.06	1.99	1.98	1.98	1.08
8 .....	3.06	3.13	3.09	2.04	2.04	2.04	1.05
9 .....	2.67	2.54	2.60	2.31	2.31	2.31	0.29
10 .....	2.88	3.01	2.95	2.29	2.24	2.26	0.69
11 .....	2.17	2.25	2.21	2.13	2.23	2.18	0.03
12 .....	2.70	2.79	2.74	2.38	2.25	2.31	0.43
13 .....	3.55	3.71	3.63	2.10	2.10	2.10	0.53
14 .....	3.21	3.24	3.22	2.17	2.25	2.21	1.01
15 .....	3.15	3.06	3.10	2.14	2.19	2.16	0.94
16 .....	3.11	3.14	3.12	2.32	2.28	2.30	0.82
17 .....	2.85	2.79	2.82	2.17	2.18	2.17	0.65
18 .....	3.59	3.29	3.44	2.08	2.08	2.08	1.36
19 .....	3.17	3.40	3.28	2.32	2.36	2.34	0.94
20 .....	3.19	3.06	3.12	2.31	2.36	2.33	0.79
21 .....	3.19	3.01	3.10	2.25	2.25	2.25	0.85
22 .....	3.06	3.06	3.06	2.23	2.26	2.24	0.82
23 .....	3.67	3.73	3.70	2.25	2.25	2.25	1.45
24 .....	3.46	3.78	3.62	2.15	2.15	2.15	1.47
.....			3.11	.....	.....	2.23	

Mean difference is 0.16 between duplicates. Mean difference is 0.04 between duplicates. Mean difference between readings is 0.88.

It thus appears that the mean error for the Canadian method is 0.16, while for the Winton method it is only 0.04. Against this must be set the fact that the average lead number for the latter method is only 2.23, as against 3.11; in other words, if the number 2.00 be taken as minimum lead number by the Canadian method, 1.43 would have to be taken as the equivalent minimum by the Winton method; and a recognized probable error of 0.04 affects the first decimal figure of such a standard. The fact is that while both methods possess value as serving to point out real differences in character between samples of maple syrup, neither method is sufficiently exact or is based upon sufficiently definite chemical reactions, to permit of safe interpretation within about one-tenth of the indication actually found.

Bulletin No. 134 of the Bureau of Chemistry, Washington, gives (pp. 75 and 76) the lead numbers for 86 samples of Canadian maple syrup (Quebec), as determined by the Winton method.

Maximum.. .. .	3.92
Minimum.. .. .	1.85
Average.. .. .	2.55

For 481 samples of syrup, representing the maple belt of the United States and Canada, the numbers are as follows:—

Maximum.. .. .	4.41
Minimum.. .. .	1.76
Average.. .. .	2.70







## SESSIONAL PAPER No. 14

In order to determine this, the following synopsis of results is given:—

No.	Lead Number.		Dry Solids.	Malic Acid.	Ash.		Remarks.
	Canadian.	Winton.			Total.	In-soluble.	
8	1.66	1.16	67.48	0.47	.....	.....	Illegal.
11	1.51	1.08	65.06	0.36	0.71	0.19	"
20	1.61	.....	66.68	0.59	0.75	0.27	Doubtful.
33	1.78	1.28	65.74	0.64	0.72	0.31	Illegal.
78	1.77	1.27	69.78	0.65	0.85	0.19	"
108	1.89	1.26	68.87	0.88	0.97	0.40	Doubtful.
154	1.94	1.49	68.10	0.59	0.82	0.24	Pass.
169	1.77	1.27	70.02	0.80	0.78	0.23	Illegal.
176	1.47	1.05	68.88	0.57	0.78	0.21	"
179	1.98	1.48	67.75	0.78	.....	.....	Pass.
207	1.57	1.12	63.44	0.74	0.85	0.25	Illegal.
209	1.93	1.46	70.47	0.49	0.97	0.28	Pass.
225	1.73	1.24	64.80	0.60	0.84	0.24	Illegal.
237	1.82	1.31	67.52	0.58	0.78	0.27	"
241	1.63	1.17	64.79	0.55	0.75	0.12	"
242	1.37	1.09	66.83	.....	0.99	0.60	"
263	1.90	.....	68.48	0.51	0.74	0.22	Doubtful.
268	1.93	1.57	67.52	0.66	0.69	0.20	Pass.
278	1.88	.....	68.41	0.71	0.72	0.29	Doubtful.
281	1.66	.....	68.42	0.54	0.79	0.24	"
284	1.94	.....	69.10	0.68	0.76	0.28	Pass.
299	1.88	.....	67.97	0.84	0.74	0.26	Doubtful.
330	1.98	.....	68.88	0.71	0.75	0.24	Pass.
338	1.90	1.32	69.10	0.76	0.75	0.27	Doubtful.
343	1.86	.....	67.71	0.72	0.83	0.25	"
383	1.88	1.27	70.46	0.61	0.75	0.24	"
385	1.54	1.25	69.10	0.72	0.84	0.24	Illegal.
391	1.50	1.17	68.88	0.68	0.70	0.23	"
392	1.66	1.07	64.93	0.85	0.72	0.30	"
395	1.80	1.55	66.38	0.83	0.75	0.33	Pass.
426	1.53	1.25	67.51	0.72	0.70	0.25	Illegal.

If judgment were based upon the lead number as obtained by the Canadian method of working, and by this datum only, the whole of the above 31 samples would have to be declared illegal. Such a mode of judging would evidently be unfair, as all the evidence must be taken into account.

*Winton lead number.*—This has been shown to bear a ratio of  $\frac{2.23}{3.11} = 0.71$  to the Canadian lead number; and, if we allow one-tenth for experimental error, the limit Winton number is 1.41.

*Dry solids* must reach 65 per cent.

*Malic acid*, by reference to the legal definition for maple sugar, must reach 0.4 per cent.

*Total ash* must be 0.5 per cent.

*Insoluble ash*, although not legally recognized as a datum, has been shown to reach 0.2 per cent in normal samples of maple syrup.

When every allowance is made for imperfection in data available, it is found that 15 samples must be declared illegal, under our present standards. It is, nevertheless, impossible for me to believe that these samples are actually adulterated. I have had correspondence with most of the makers of these samples, and am perfectly convinced of their integrity, and indeed of their earnest wish to assist the department in protecting the maple industry. One of them has recently sent me four samples of syrup (tabulated as A, B, C, D), from Wisbeach, Lambton Co., and three of these give results



3 GEORGE V., A. 1913

for 'lead number' which would classify them as illegal under present standards. Yet these samples are fully vouched for as genuine maple products, and from the sap of the hard maple only. They have evidently been made with great care, and it is probable that it is to the care taken in their manufacture that the exceptionally low lead numbers are to be ascribed.

It seems, therefore, to be quite well established that while the great majority of maple syrups yield lead numbers much exceeding 2.2, maple syrup of genuine character may occur yielding lead numbers, which for the Canadian method of working do not exceed 1.50, and for the Winton method, 1.10.

Perhaps the most satisfactory determinations which the analyst can make upon maple syrup, have regard to the mineral constituents. When the syrup is evaporated to dryness and burned, these remain as the *ash*, and are found to be chiefly carbonates of lime and potash, with varying amounts of phosphates, sulphates, silica, &c.

The determination of total ash must be made upon the clear syrup, after sufficiently prolonged standing to ensure the settling out of all suspended matters. If this condition be fulfilled, and care be taken to prevent reduction of the carbonate of lime to oxide, or to reconvert to carbonate before weighing, very satisfactory duplicate estimations can be obtained.

The ashing of maple syrup, or indeed of any substance containing large amounts of carbonaceous matter, must be performed with great care, or serious loss will result. The dried material is slowly charred, over a small flame, and the combustion completed in a muffle, and at as low temperature as possible.

Bulletin No. 134 of the Bureau of Chemistry, Washington, gives the total ash determinations (pp. 75 and 76) of 86 samples of Canadian maple syrup, obtained in the province of Quebec, and under conditions which make it probable that they must be regarded as genuine, in the sense of their being entirely the product of maple sap. Calculated to a dry basis these gave:—

Maximum total ash per cent . . . . .	1.35
Minimum total ash per cent. . . . .	0.77
Average. . . . .	0.95

The figures for total ash obtained from 481 samples of maple syrup, representing all the maple-producing states of the Union, as well as Canada, are as follows:—

Maximum total ash per cent. . . . .	1.68
Minimum total ash per cent. . . . .	0.68
Average. . . . .	1.02

The ash has been determined upon 115 samples of the 456 constituting this report, with the following results:—

Maximum total ash per cent. . . . .	1.38
Minimum total ash per cent. . . . .	0.69
Average. . . . .	0.89

Not much importance can be attached to the maxima, nor even to the averages quoted above. The really important question for us is: What is the lowest percent-



## SESSIONAL PAPER No. 14

age of ash that a genuine maple syrup can yield? So far as this work goes, and on the assumption that all the samples examined are genuine, we must expect as low as 0.69 per cent of ash (reckoned on the dry basis), in occasional samples of genuine maple syrup. That so low an ash percentage as this is quite exceptional appears from the following. Of 115 samples the—

Total ash per cent is below.. . . . .	0.70	in 1 sample.
“ “ . . . . .	0.72	“ 5 samples.
“ “ . . . . .	0.74	“ 9 “
“ “ . . . . .	0.76	“ 19 “
“ “ . . . . .	0.78	“ 22 “
“ “ . . . . .	0.80	“ 34 “

*Insoluble ash.*—This is essentially carbonate of lime, with traces of magnesia, iron, phosphates and silica. It has been generally regarded as an important datum in judging the genuineness of maple syrup. Work done in Washington (Bulletin 134, Bureau of Chemistry) gives, for 481 samples, as follows:—

Maximum insoluble ash per cent.. . . . .	1.01
Minimum insoluble ash per cent.. . . . .	0.23
Average.. . . . .	0.37

Of the 115 guaranteed samples now reported, the figures for insoluble ash are as follows:—

Maximum insoluble ash per cent.. . . . .	0.75
Minimum insoluble as per cent.. . . . .	0.12
Average . . . . .	0.33

In this case, as with total ash, importance attaches mainly to the *minimum* number. That 0.12 per cent of insoluble ash is exceptionally low, appears from the following considerations.

Of 115 samples, very carefully ashed, we find:—

0.12 per cent insoluble ash in . . . . .	1 sample.
0.14 “ “ . . . . .	1 “
0.19 “ “ . . . . .	3 samples.
0.20 “ “ . . . . .	2 “
0.21 “ “ . . . . .	4 “
0.22 “ “ . . . . .	2 “
Below 0.23 “ “ we find.. . . . .	13 “
“ 0.20 “ “ “ . . . . .	5 “
“ 0.19 “ “ “ . . . . .	2 “

or 1.7 per cent of the number examined.

It would appear that in this datum, as in the case of basic lead numbers and malic acid numbers, improved modern methods of manufacture tend to reduce the number in question. It is further probable that the 0.20 represents the minimum insoluble ash of carefully made syrups, from normal sap. The case in which a lower number than 0.20 is found must be regarded as exceptional, although not necessarily untrue to name.

In determinations of ash it is important that any sugar crystallized out be redissolved before sampling; as it is found that mineral matters, and particularly lime and magnesia salts are carried down with the sugar crystals.



3 GEORGE V., A. 1913

BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Subac- tate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.				
							Lead Sub- acetate ppt.	Malic Acid, value.		Total.	Water Soluble.	Insoluble.		
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
Mar. 23	Maple Syrup.....	1	S. Sherwood, Ostrander, Ont..	31.32	68.78	1.76	2.55	0.75	.....	.....	.....	.....		
" 30	" .....	2	— Stewart, Farquhar, Ont....	33.24	66.76	1.48	2.22	0.61	.....	.....	.....	.....		
" 30	" .....	3	W. J. Vance, Farquhar, Ont..	32.14	67.86	1.18	2.23	0.67	.....	0.78	0.49	0.29		
" 30	" .....	4	A. Campbell, Farquhar, Ont..	33.78	66.26	1.44	2.17	0.58	.....	.....	.....	.....		
" 30	" .....	5	Thos. Hunkin, Farquhar, Ont.	35.44	64.66	1.53	2.34	0.67	.....	.....	.....	.....		
" 30	" .....	6	J. Stewart, Farquhar, Ont. . .	33.68	66.32	1.43	2.15	0.54	.....	0.79	0.42	0.37		
" 30	" .....	7	Chas. Cann, Thames Road, Ont.	31.60	68.40	1.90	2.77	0.52	.....	.....	.....	.....		
" 30	" .....	8	John Cann, Thames Road, Ont.	32.52	67.46	1.12	1.66	0.47	1.16	.....	.....	.....	Clarified with cream and skimmed. Illegal under present standards.	
" 30	" .....	9	Albert Hunkin, Thames Road, Ont.	32.14	67.86	1.62	2.38	0.45	.....	0.85	0.49	0.36		
" 30	" .....	10	E. Stone, Thames Road, Ont..	32.48	67.52	1.78	2.63	0.36	.....	.....	.....	.....	Malic acid low.	
" 21	" .....	11	Wm. H. McAllister, Dutton, Ont.	34.94	65.06	0.99	1.51	0.36	1.08	0.71	0.52	0.19	Malic acid low. Soft maple sap. Illegal under present standards. Excess water.	
" 30	" .....	12	W. E. Clark, Dutton, Ont. . .	35.88	64.12	2.47	3.85	0.62	.....	.....	.....	.....	"	
" 30	" .....	13	John T. Graham, Dutton, Ont.	35.76	64.24	1.07	3.22	0.56	.....	.....	.....	.....	"	
April 1	" .....	14	W. R. Pollard, Iona, Ont. . .	37.14	62.86	2.44	3.87	0.98	.....	.....	.....	.....		
Mar. 29	" .....	15	Alex. Lindsay, Holbrook, Ont.	32.68	67.32	1.48	2.19	0.32	.....	0.78	0.45	0.33	Malic acid low.	



[illegible]







28	"	56	L. Michon, Salvail La presentation, P.Q.	32.60	67.40	.....	3.20	0.74	.....	.....	.....	.....
" 13	"	57	C. Fisk, Abbotsford, P.Q.	34.66	65.34	.....	3.52	0.57	.....	.....	.....	.....
.....	"	58	Henri Dubuc, North Hatley, P.Q.	31.30	68.70	.....	3.67	0.85	.....	.....	.....	.....
April 29	"	59	P. Rodrigue, Compton, P.Q.	32.30	67.70	.....	3.29	0.84	.....	.....	.....	.....
" 13	"	60	W. B. Honey, Abbotsford, P.Q.	30.46	69.54	.....	3.91	0.84	.....	.....	.....	.....
" 14	"	61	E. E. Buzzell, Abbotsford, P.Q.	34.90	65.10	.....	3.44	0.84	0.95	0.57	0.38	.....
" 22	"	62	Alph. Jilbert, Compton, P.Q.	26.52	73.48	.....	2.80	0.99	.....	.....	.....	.....
" 29	"	63	S. Beauregard, Waterville, P.Q.	31.72	68.28	.....	2.66	0.75	0.95	0.48	0.47	.....
May 9	"	64	N. H. Moffatt, West Ely.	33.31	66.69	.....	3.43	0.78	.....	.....	.....	.....
.....	"	65	C. Potvin, Lawrenceville, P.Q.	34.99	65.01	.....	3.68	0.72	.....	.....	.....	.....
April 18	"	66	A. J. Brown, Lawrenceville, P.Q.	34.06	65.94	.....	3.00	0.89	.....	.....	.....	.....
" 25	"	67	A. Blanchard, Lawrenceville, P.Q.	31.33	68.67	.....	3.05	0.80	.....	.....	.....	.....
.....	"	68	A. Westover, Sutton Junction, P.Q.	30.43	69.54	.....	3.68	0.84	.....	.....	.....	.....
.....	"	69	" " " "	34.99	65.01	.....	3.00	0.63	.....	.....	.....	.....
.....	"	70	Sample No. 2, natural.	33.17	66.83	.....	2.69	0.69	.....	.....	.....	.....
.....	"	71	" " No. 2, refined.	32.71	67.29	.....	2.88	0.69	.....	.....	.....	.....
.....	"	72	" " No. 3, natural.	33.62	66.38	.....	4.09	0.79	0.99	0.54	0.45	.....
.....	"	73	" " No. 3, refined.	33.17	66.83	.....	3.71	0.79	.....	.....	.....	.....
April 25	"	74	Victor Roberge, Lawrenceville, P.Q.	32.48	67.52	1.60	2.37	0.71	.....	.....	.....	.....
" 25	"	75	Ovide Roberge, Lawrenceville, P.Q.	30.45	69.55	1.67	2.40	0.69	.....	.....	.....	.....
" 25	"	76	Jos. Bourassa, Lawrenceville, P.Q.	31.33	68.67	1.62	2.36	0.57	.....	.....	.....	.....
" 11	"	77	Achille Lagrandeur, Lawrenceville, P.Q.	32.99	67.01	2.00	2.98	0.66	.....	.....	.....	.....
" 25	"	78	Louis J. Gagnon, Lawrenceville, P.Q.	30.22	69.78	1.24	1.77	0.65	1.27	0.85	0.66	0.19
" 19	"	79	P. Leduc, Mont St. Hilaire, P.Q.	30.21	65.79	2.28	3.27	0.87	.....	.....	.....	.....
" 20	"	80	Euclide Tetrault, Le Deboilli de St. Hilaire, P.Q.	31.36	68.64	2.0	3.02	0.81	.....	.....	.....	.....

Made with care. Illegal under present standards.



Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Sub- sate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.				
							Lead Sub- acetate ppt.	Malic Acid, value.		Total.	Water Soluble.	Insoluble.		
1911.				p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	Maple Syrup.....	81	Isidore Dragon, St. Ours, P.Q.	30.71	69.29	2.45	3.54	0.75	.....	.....	.....	.....	.....	
April 18	"	82	Treffe Auclair, Rochelle, P.Q.	31.83	68.15	2.27	3.33	0.80	.....	.....	.....	.....	.....	
May 10	"	83	Jos. Morin, Valcourt, P.Q....	33.17	66.83	2.34	3.50	0.75	.....	.....	.....	.....	.....	
April 13	"	84	Chas. E. Slack, Abbotsford, P.Q.	34.96	65.04	2.01	3.09	0.87	.....	.....	.....	.....	.....	
" 20	"	85	Alfred Catry, St. Hilaire, Vil- lage, P.Q.	32.75	67.25	2.32	3.37	0.86	.....	.....	.....	.....	.....	
" 20	"	86	Isa. Gauthier, St. Hilaire Vil- lage, P.Q.	29.98	70.02	1.72	2.46	0.69	.....	.....	.....	.....	.....	
" 20	"	87	C. Charbonneau, St. Hilaire, P.Q.	30.21	69.79	2.28	3.27	0.84	.....	.....	.....	.....	.....	
.....	"	88	J. Genest, St. Hilaire, P.Q.	32.75	67.25	1.90	2.83	0.75	.....	.....	.....	.....	.....	
" 19	"	89	Mad. A. Auclair, St. Hilaire Stn., P.Q.	31.33	68.67	1.42	2.07	0.52	.....	.....	0.84	0.61	0.23	
" 4	"	90	Z. Anthier, Le Debouli, P.Q..	29.76	70.24	1.78	2.53	0.75	.....	.....	.....	.....	.....	
" 25	"	91	Jos. Reid, Lawrenceville, P.Q.	30.22	69.78	1.48	2.12	0.51	.....	.....	.....	.....	.....	
.....	"	92	A. Fontaine, Lawrenceville, P.Q.	31.85	68.15	1.60	2.35	0.68	.....	.....	.....	.....	.....	
April 25	"	93	Jos. Roberge, Lawrenceville, P.Q.	33.62	66.38	2.11	3.18	0.61	.....	.....	.....	.....	.....	
" 4	"	94	N. Guffin, St. Hilaire Village, P.Q.	31.85	68.15	2.00	2.93	0.89	.....	.....	.....	.....	.....	



SESSIONAL PAPER No. 14

19	"	.....	95	E. Auclair, St. Hilaire Stn., P.Q.	31.36	68.64	1.61	2.35	0.81	.....	.....	.....
"	19	.....	96	P. Germain, Mont St. Hilaire, P.Q.	29.98	70.62	1.74	2.48	0.84	.....	.....	.....
"	19	.....	97	Alph. Rainlette, Mont St. Hilaire, P.Q.	31.85	68.15	1.70	2.49	0.52	.....	.....	.....
.....	"	.....	98	E. Pion, Mont St. Hilaire, P.Q.	29.98	70.02	2.05	3.00	0.85	.....	.....	.....
.....	"	.....	99	Pierre Denis, Mont St. Hilaire, P.Q.	.....	.....	.....	.....	.....	.....	.....	Sample lost.
"	22	.....	100	F.J. Beckett, Orford, P.O., N.S.	32.48	67.52	2.49	3.69	0.62	.....	.....	.....
"	24	.....	101	B.F. Coats, Pr. S. Boy, Gould Station.	33.60	66.40	1.97	2.97	0.68	.....	.....	.....
.....	"	.....	102	Neva Asker, Canterbury.....	31.85	68.15	1.30	2.11	0.66	.....	0.84	0.35 From frozen sap.
.....	"	.....	103	Jean Rodrique, Compton.....	32.48	67.52	1.49	2.21	0.89	.....	.....	.....
April 18	"	.....	104	Cyprien Larivée, St. Hilaire Stn.	35.43	64.57	2.27	3.52	0.46	.....	.....	.....
"	18	.....	105	Arnaud Renaud, St. Hilaire Stn.	28.84	71.16	1.75	2.46	0.57	.....	.....	.....
"	22	.....	106	W. J. Draper & Sons, Compton, P.Q.	30.50	69.50	1.49	2.14	0.77	.....	.....	.....
"	22	.....	107	Pierre Simoneau, Compton, P.Q.	30.67	69.33	1.88	2.71	0.43	.....	.....	.....
May 1	"	.....	108	W. L. Wood, South Barnston, P.Q.	31.13	68.87	1.28	1.89	0.88	1.26	0.97	0.57 0.40 Second growth maples.
April 22	"	.....	109	P. W. Baldwin, Stanstead, P.Q.	31.85	68.15	1.48	2.17	0.44	.....	.....	.....
"	21	.....	110	Jno. F. Groom, Canterbury, P.Q.	32.25	67.75	1.71	2.52	0.56	.....	.....	.....
"	20	.....	111	J. Laurier, St. Cyrille, D. W. P.Q.	33.17	66.83	2.35	3.52	0.88	.....	.....	.....
"	24	.....	112	D. Hebert, Drummondville, P.Q.	32.99	67.01	1.86	2.78	0.78	.....	.....	.....
"	14	.....	113	Robt. Whitney, Abbotsford, P.Q.	31.59	68.41	1.65	2.41	0.67	.....	.....	.....
"	17	.....	114	C. Chalifoux, Inglis Corners, P.Q.	31.59	68.41	1.56	2.28	0.67	.....	.....	.....
"	17	.....	115	Asa Shepard, Frelighsburg, P.Q.	31.13	68.87	1.60	2.32	0.74	.....	.....	.....
"	17	.....	116	E. S. Spencer, Hillside, P.Q.	32.94	67.06	1.51	2.25	0.64	.....	.....	.....
"	15	.....	117	Nelson Domingue, Niles Corners, P.Q.	30.45	69.55	3.07	4.41	1.05	.....	.....	.....
"	20	.....	118	H. Brown, Hillside, P.Q.	35.42	64.58	1.53	2.37	0.67	.....	.....	.....
"	21	.....	119	O. C. Reynolds, St. Amands Centre, P.Q.	30.45	69.55	1.89	2.72	0.78	.....	.....	.....



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Subse- tate ppt.	Calculated on dry Substance.			Lead number, Winton Method.	Ash.				
							Lead Sub- acetate ppt.	Malic Acid, value.	p. c.		Total.	Water Soluble.	Insoluble.		
														p. c.	
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
April 12	Maple Syrup.	120	Cezarie Choquette, Beloeil Vil- lage, P.Q.	32.75	67.25	1.98	2.94	0.77							
" 22	"	121	Odilon Bureau, Compton, P.Q.	30.90	69.10	1.58	2.29	0.76							
" 11	"	122	Alphonse Burelle, Beloeil Vil- lage, P.Q.	31.12	68.28	1.89	2.74	0.88							
" 20	"	123	Harley R. Goodhue, Abbots Corners, P.Q.	30.00	70.00	2.32	3.31	0.74							
" 21	"	124	Chas. Westover, Abbots Cor- ners, P.Q.	32.72	67.28	1.79	2.66	0.71							
" 25	"	125	Geo. Mitchell, Drummond- ville, P.Q.	31.12	68.88	2.74	3.98	0.79							
" 25	"	126	B. Mitchell, Drummondville, P.Q.	31.35	68.65	2.45	3.57	0.73							
" 15	"	127	Ernest Demers, St. Vict. d'Arthabaska.	33.60	66.40	1.65	2.48	0.82							
	"	128	Jos. Brisson, St. Helene de Chesler, P.Q.	30.90	69.10	1.79	2.59	0.62							
April 12	"	129	Jno. Poirier, St. Valier de Bulde., P.Q.	30.90	69.10	1.44	2.08	0.45							
" 15	"	130	Onesime Boislard, St. Nohet d'Arthabaska, P.Q.	30.67	69.33	1.84	2.65	0.84							
	"	131	Phillipe Mathieu, St. Ours, P.Q.	32.94	67.06	1.84	2.74	0.90							
	"	132	Eustache Barette, Beloeil, P.Q.	32.25	67.75	2.66	3.93	0.85							
	"	133	Albert Lousiguart, St. Chris- tine, P.Q.	30.21	69.79	1.84	2.64	0.97		0.97	0.70	0.27			
April 20	"	134	Alexis Ares, Waterloo, P.Q.	30.21	69.79	2.49	3.57	0.99							



13	"	135	Geo. Roach, Abbotsford, P.Q.	34.99	65.01	2.31	3.55	0.95	.....	
24	"	136	W. H. Talbot, Warden, P.Q.	30.50	69.50	1.79	2.58	0.94	.....	
" 20	"	137	G. A. Talbot, Warden, P.Q.	29.54	70.46	2.00	2.84	0.88	.....	
.....	"	138	Fred. Whitehead, South Stukely, P.Q.	37.29	62.71	2.29	3.65	0.78	.....	Excess water.
.....	"	139	G. Williams, Fulford, P.Q.	30.90	69.10	1.80	2.60	0.84	.....	
April 18	"	140	Jos. Rainville, St. Anne, P.Q.	30.90	69.10	2.08	3.01	0.85	.....	
" 21	"	141	Ovida Ares, Waterloo, P.Q.	31.58	68.42	1.83	2.67	0.62	.....	
" 22	"	142	Byron Smith, South Roxton, P.Q.	33.39	66.61	1.65	2.48	0.70	.....	
" 25	"	143	Ludger Blanchard, Stukely, P.Q.	33.39	66.61	1.41	2.12	1.03	.....	
May 3	"	144	Jno. P. Dunn, Warden, P.Q.	32.49	67.51	2.19	3.24	0.84	.....	
April 19	"	145	N. Campbell, Waterloo, P.Q.	32.72	67.28	1.55	2.30	0.66	.....	
" 25	"	146	Wilfrid Marrois, St. Joachim Shefford, P.Q.	32.50	67.50	1.46	2.16	0.82	.....	Excess water.
" 20	"	147	V. S. Mairs, Warden, P.Q.	35.88	64.12	2.13	3.32	1.03	.....	
" 15	"	148	A. N. Booth, Waterloo, P.Q.	32.50	67.50	1.90	2.81	0.97	.....	
" 27	"	149	Jas. E. Lewis, Warden, P.Q.	32.48	67.52	2.50	3.70	0.97	.....	
.....	"	150	E. J. Standish, Warden, P.Q.	33.62	66.38	1.64	2.47	0.84	.....	
April 20	"	151	Jos. Marquis, West Shefford, P.Q.	33.16	66.84	2.17	3.25	0.94	.....	
" 28	"	152	D. Ashton, Warden, P.Q.	31.12	68.88	1.64	2.38	0.78	.....	
Mar. 29	"	153	Cohoe Bros., New Durham, Ont.	33.39	66.61	1.41	2.12	0.78	.....	
" 21	"	154	Burt Kennedy, Ilderton, Ont.	31.90	69.10	1.26	1.94	0.59	1.49	0.82 0.58 0.24 Made with care.
.....	"	155	M. chael Deneen, Strabane, P.O., Ont.	34.52	65.48	2.47	3.77	0.93	.....	
April 3	"	156	David De Geir, Hannon, Ont.	32.99	67.01	2.76	4.12	0.73	.....	
" 6	"	157	Jos. O'Brien, Nilestown, Ont.	34.98	65.02	1.86	2.86	0.94	.....	
" 6	"	158	Henry Hart, Nileston, Ont.	31.36	68.64	1.41	2.06	0.65	.....	0.82 0.48 0.34
Mar. 25	"	159	R. M. Ecker, Binbrook, Ont.	35.00	65.00	1.87	2.88	0.70	.....	



Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Subac-tate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.				
							Lead Sub- acetate ppt.	Malic Acid, value.		Total.	Water Soluble.	Insoluble.		
1911.				p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
.....	Maple Syrup.....	160	Judson Barlow, Binbrook, Ont.	33.39	66.61	2.29	3.44	0.73	.....	.....	.....	.....		
.....	"	161	Jno. Sanderson, Strabane, Ont	32.25	67.75	1.68	2.48	0.79	.....	.....	.....	.....		
Mar. 30	"	162	D. J. McKillop, Wallacetown, Ont.	34.96	65.04	2.39	3.67	0.79	.....	.....	.....	.....		
.....	"	163	L. L. Jenner, prop., E.T. M. S. and Syrup Exchange, Sutton, P.Q.	30.90	69.10	1.57	2.27	0.56	.....	.....	.....	.....		
.....	"	164	Jos. Bouchard.....	34.07	65.93	2.25	3.41	0.89	.....	.....	.....	.....		
April 19	"	165	I. W. Whitecomb, East Hatley, P.Q.	33.76	66.34	1.99	3.00	0.98	.....	.....	.....	.....		
.....	"	166	C. B. Welch, Franklin Centre, P.Q.	34.99	65.01	1.73	2.66	0.99	.....	.....	.....	.....		
April 14	"	167	F. E. Richardson, Ayers Cliff, P.Q.	32.48	67.52	2.04	3.02	0.75	.....	.....	.....	.....		
" 25	"	168	E. E. Temple, Brown Hill, P.Q.	34.96	65.04	1.88	2.89	0.92	.....	.....	.....	.....		
" 15	"	169	Claude E. Honey, Way's Mills, P.Q.	29.98	70.02	1.24	1.77	0.80	1.27	0.78	0.55	0.23	Made with care. Illegal under present standards.	
" 15	"	170	Herbert Webster, Hatley, P.Q.	33.39	66.61	2.08	3.12	0.61	.....	.....	.....	.....		
18	"	171	Moise Vien, St. Antoine, P.Q.	33.16	66.84	2.18	3.26	0.63	.....	.....	.....	.....		
.....	"	172	W. D. Hamill, Covey Hill, P.Q.	32.49	67.51	2.55	3.78	0.53	.....	.....	.....	.....		
.....	"	173	Wilfrid Payant, Russelltown Flats, P.Q.	32.48	67.52	2.34	3.47	0.48	.....	.....	.....	.....		



SESSIONAL PAPER No. 14

.....	"	.....	174	Geo. Hawker, Wisbeach.....	30.21	69.79	1.58	2.26	0.73	.....	0.90	0.54	0.36	Hard maple only. Illegal under present standards.
April 18	"	.....	175	R. Wilson, Franklin Centre..	31.36	68.64	1.58	2.30	0.58	.....	.....	.....	.....	
" 10	"	.....	176	J. Y. Williams, Wisbeach, Ont.	31.12	68.88	0.93	1.47	0.57	1.05	0.78	0.57	0.21	
" 14	"	.....	177	Alex. Leblanc, Katevale, P.Q.	32.72	67.28	1.84	2.73	0.95	.....	.....	.....	.....	
" 15	"	.....	178	F.W. Duston, Ayers Cliff, P.O.	35.43	64.57	1.75	2.71	0.78	.....	.....	.....	.....	
" 20	"	.....	179	A. Bryan, Hatley.....	32.25	67.75	1.34	1.98	0.78	1.48	.....	.....	.....	
" 1	"	.....	180	Herbert Fletcher, Nassagaweya, Ont.	35.89	64.11	1.81	2.82	0.88	.....	.....	.....	.....	
" 18	"	.....	181	Julien Tremblay, Franklin Centre.	29.54	70.46	1.86	2.89	0.79	.....	.....	.....	.....	
" 18	"	.....	182	Laurent Prevost, Batram.....	31.13	68.87	1.52	2.21	0.77	.....	.....	.....	.....	
.....	"	.....	183	Robt. Lucas, Ormstown.....	28.17	71.83	2.40	3.34	0.68	.....	.....	.....	.....	
April 1	"	.....	184	Fred. Cadman, Arkona, Ont..	30.90	69.10	2.00	2.90	0.84	.....	0.94	0.64	0.30	
Mch. 29	"	.....	185	Floyd Smith, Arkona, Ont...	30.90	69.10	1.91	2.76	0.88	.....	0.90	0.54	0.36	
.....	"	.....	186	Ed.R.Lowder, Geraldine,P.Q.	31.12	68.88	1.49	2.16	0.79	.....	0.85	0.54	0.31	
April 18	"	.....	187	P. B. Vallancourt, Franklin Centre.	32.25	67.75	1.59	2.35	0.95	.....	0.87	0.60	0.27	
Mch. 28	"	.....	188	G. Kingsbury, Nassagaweya, Ont.	29.98	70.02	2.11	3.01	0.95	.....	1.02	0.54	0.48	
" 31	"	.....	189	Thos. Richardson, Nassagaweya, Ont.	38.59	61.41	1.91	3.11	1.00	.....	0.91	0.54	0.37	Excess water.
April 1	"	.....	190	John Locker, Knatchbull, Ont	32.48	67.52	1.80	2.67	0.74	...	0.91	0.55	0.36	
Mch. 31	"	.....	191	C. A. Darby, Knatchbull, Ont	31.81	68.19	1.51	2.21	0.55	.....	0.81	0.52	0.29	
" 24	"	.....	192	Will. J. McKenzie, Arkona, Ont.	31.58	68.42	2.00	2.92	0.64	.....	.....	.....	.....	
April 10	"	.....	193	W. J. Pym, Anderson, Ont. .	29.99	70.01	1.79	2.56	0.92	.....	1.03	0.66	0.37	
Mch. 25	"	.....	194	J. T. Muxlow, Arkona, Ont...	30.90	69.10	2.48	3.59	0.70	.....	1.14	0.72	0.42	
" 29	"	.....	195	Carl Smith, Arkona, Ont.....	30.21	69.79	1.71	2.45	0.68	.....	0.96	0.72	0.24	
" 30	"	.....	196	G. H. Snyder, St. Ann's, Ont.	32.25	67.75	1.87	2.76	0.70	.....	.....	.....	.....	
" 31	"	.....	197	Alfred Taylor, St. Ann's, Ont.	30.32	69.78	2.22	3.18	0.72	.....	.....	.....	.....	
" 24	"	.....	198	F. Langan, Arkona, Ont.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Sample lost.
" 25	"	.....	199	S. S. Smith, Arkona, Ont.....	29.98	70.02	2.02	2.89	0.64	.....	.....	.....	.....	



BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.												Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.			Lead Sub- stance.		Calculated on dry Substance.	Lead number, Winton Method.	Ash.				
					p. c.	p. c.	p. c.	Lead Sub- acetate ppt.	Malic Acid, value.			Total.	Water Soluble.	Insoluble.		
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
April 15	Maple Syrup	200	Jas. Purvis, Felton, Ont.	37.01	62.99	2.40	3.81	0.93	.....	.....	.....	.....	.....	.....	Excess water.	
" 15	"	201	Jno. C. Low, Vernon, Ont.	32.72	67.28	2.00	2.97	0.60	.....	.....	.....	.....	.....	.....		
" 11	"	202	Alfred Ross, Russelldale, Ont.	38.58	61.42	1.69	2.75	0.66	.....	.....	.....	.....	.....	.....	Excess water.	
" 15	"	203	Hector Craig & Sons, Ken more, Ont.	31.13	68.87	1.52	2.20	0.62	.....	.....	.....	.....	.....	.....		
.....	"	204	T. H. Fuller, Watford.	33.62	66.38	1.56	2.35	0.48	.....	.....	.....	.....	.....	.....		
April 14	"	205	Herbert Yull, Kirkton, Ont.	30.90	69.10	2.01	2.91	0.74	.....	.....	.....	.....	.....	.....		
.....	"	206	M. Brooks, Alberton, Ont.	37.01	62.99	2.08	3.30	0.71	.....	.....	.....	.....	.....	.....	Excess water.	
.....	"	207	Wilfrid Larose, Angers, P.Q.	36.56	63.44	0.89	1.57	0.74	1.12	0.85	0.60	0.25	0.85	0.60	Excess water. Illegal under present standards.	
Mar. 26	"	208	J. B. Zimmerman, Silverdale, Ont.	32.71	67.29	1.74	2.59	.....	.....	1.03	0.78	0.25	.....	.....		
April 22	"	209	Simeon Joanis, Angers, P.Q.	29.53	70.47	1.36	1.93	0.49	1.46	0.97	0.69	0.28	0.97	0.69		
.....	"	210	A. C. Krause, Jerseyville.	32.48	67.52	1.92	2.81	0.56	.....	0.93	0.57	0.36	0.93	0.57		
Mar. 26	"	211	Wm. Marshall, Arkona, Ont.	32.48	67.52	1.90	2.81	0.88	.....	0.91	0.45	0.46	0.91	0.45		
April 18	"	212	E. W. Acres, Vernon, Ont.	34.52	65.48	1.69	2.58	0.84	.....	0.85	0.41	0.44	0.85	0.41		
" 11	"	213	Ed. Hanson, Russelldale, Ont.	33.86	66.74	1.38	2.08	0.84	.....	0.81	0.43	0.38	0.81	0.43		



## SESSIONAL PAPER No. 14

" 15	"	214	W. E. R. Stanley, North Os- goode, Ont.	33·62	66·38	3·14	4·73	1·11	.....	1·30	0·57	0·73	
" 20	"	215	Ed. Ferguson, Anderson, Ont.	32·48	67·52	1·89	2·80	0·79	.....	0·97	0·76	0·21	
Mar. 31	"	216	Jno. Harcourt, St. Ann's, Ont.	32·02	67·98	2·35	3·46	0·69	.....	1·02	0·66	0·36	
" 15	"	217	W. A. Scharfe, Templeton, P.Q.	33·63	66·37	2·17	3·27	0·83	.....	1·05	0·64	0·41	
April 13	"	218	J. M. Snyder, St. Ann's, Ont.	31·12	68·88	2·00	2·90	0·50	.....	0·99	0·72	0·27	
" 13	"	219	E. Lane, Silverdale, Ont. ....	37·63	62·37	1·54	2·47	0·72	.....	.....	.....	.....	Excess water.
Mar. 28	"	220	W. M. Zimmerman, Smith- ville, Ont.	32·29	67·71	1·75	2·58	0·70	.....	.....	.....	.....	
" 30	"	221	Thos. Cosby, St. Ann's, Ont.	30·44	69·56	1·67	2·40	0·87	.....	.....	.....	.....	
April 13	"	222	J. A. Davis, Fallowfield, Ont.	37·01	62·99	1·55	2·46	0·57	.....	.....	.....	.....	"
" 13	"	223	Jas. Shaw, South Gloucester, Ont.	35·65	64·35	1·81	2·81	0·86	.....	.....	.....	.....	"
" 22	"	224	Daniel McDonald, North Os- goode, Ont.	.....	.....	.....	.....	.....	.....	.....	.....	.....	Sample lost.
" 15	"	225	Ed. Laurin, Gatineau Point ..	35·20	64·80	1·12	1·73	0·60	1·24	0·84	0·60	0·24	Illegal under present stan- dards.
" 18	"	226	Jas. York, Springhill, Ont. ...	22·26	67·74	2·47	3·65	0·51	.....	1·11	0·61	0·50	
" 15	"	227	Jas. A. Baragar, Felton, Ont. ..	37·01	62·99	2·62	4·16	0·98	.....	.....	.....	.....	Excess water.
" 15	"	228	Ed. York, North Osgoode, Ont	33·84	66·16	2·62	3·96	0·89	.....	.....	.....	.....	
Mch. 31	"	229	S. S. Vansickle & S. E. Drape, Jerseyville, Ont.	34·07	65·93	1·65	2·50	0·80	.....	.....	.....	.....	
.....	"	230	Edwin Vansickle, Jerseyville, Ont.	31·12	68·88	2·01	2·92	0·85	.....	.....	.....	.....	
April 13	"	231	H. H. Hitchcock, Silverdale, Ont.	32·48	67·52	1·35	2·00	0·88	.....	.....	.....	.....	
" 3	"	232	Addison Embury, Jerseyville, Ont.	31·38	68·42	1·98	2·90	0·61	.....	.....	.....	.....	
" 13	"	233	Rufus Grey, Greely, Ont. ....	37·46	62·54	2·37	3·79	0·95	.....	.....	.....	.....	Excess water.
" 3	"	234	W. T. Howell, Capetown, Ont	30·22	69·78	2·09	3·00	0·83	.....	.....	.....	.....	
" 20	"	235	Silas Lennox, North Osgoode, Ont.	30·44	69·56	3·10	4·46	0·70	.....	.....	.....	.....	
Mch. 24	"	236	Wm. Yule, Kirkton, Ont. ....	32·26	67·74	1·46	2·15	0·83	.....	.....	.....	.....	
April 4	"	237	Wilbert Book, Jerseyville, Ont	32·48	67·52	1·23	1·82	0·58	1·31	0·78	0·51	0·27	Made with great care. Illegal under present standards.
Mch. 28	"	238	A. H. Schmick, Smithville, Ont	31·13	68·87	2·00	2·90	0·77	.....	.....	.....	.....	



BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.	
				Moisture.	Solids.	Lead Subacetate ppt.	Calculated on dry Substance.			Lead number, Winton Method.	Ash.				
							Lead Subacetate ppt.	Malic Acid, value.	p. c.		Total.	Water Soluble.	Insoluble.		
1911				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
April 3	Maple Syrup	239	Roy E. House, Ancaster, Ont.	32.94	67.06	1.75	2.61	0.78	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
"	"	240	Thos. C. Wilson, Jerseyville, Ont.	30.67	69.33	2.00	2.89	0.86	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
Mich. 27	"	241	Ernie Patterson, Smithville, Ont.	35.21	64.79	1.06	1.63	0.55	1.17	0.75	0.63	0.12	0.60	0.60	Chiefly soft maple made with care. Illegal under present standards.
April 22	"	242	Aime Mongein, Angers, P.Q.	33.17	66.83	0.91	1.37	0.30	1.09	0.99	0.39	0.60	0.60	0.60	Illegal under present standards.
" 3	"	243	Wm. R. Kelly, Alberton, Ont.	33.85	66.15	2.10	3.18	0.68	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
" 22	"	244	Robt. Henderson, Dalmeny, Ont.	33.39	66.61	2.37	3.56	1.00	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
" 22	"	245	Thos. Barrett, Cantley, P.Q.	37.45	62.55	3.54	5.66	1.04	p. c.	1.38	0.79	0.59	0.59	0.59	Excess water.
" 20	"	246	Walter Gowans, Anderson, Ont.	33.40	66.60	2.15	3.23	0.84	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	Excess water.
" 22	"	247	Daniel Cameron, Springhill, Ont.	36.33	63.67	2.06	3.24	0.89	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	Excess water.
" 7	"	248	Lorne Book, Silverdale, Ont.	31.81	68.19	2.44	3.58	0.58	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
" 20	"	249	M. E. Langford, Dunrobin, Ont.	32.26	67.74	2.59	3.82	0.81	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
" 11	"	250	Cephas J. Drouin, Russelldale, Ont.	35.65	64.35	1.57	2.44	0.99	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	Excess water.
" 13	"	251	William Switzer, Anderson, Ont.	35.43	64.57	1.58	2.45	0.52	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
" 13	"	252	Fred. Aubin, Gatineau Point.	35.88	64.12	1.92	3.00	1.01	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	Excess water



"	14	"	.....	253	Francis Anderson, Kirkton, Ont.	30·90	69·10	1·40	2·03	0·56	.....	0·79	0·50	0·29	
"	29	"	.....	254	Isiah Booth, Foster, P.Q. ....	33·17	66·83	1·66	2·48	0·59	.....	.....	.....	.....	
"	20	"	.....	255	Ernest Rollins, South Stukely, P.Q.	32·03	67·97	1·93	2·84	0·63	.....	.....	.....	.....	
"	20	"	.....	256	D. M. Stewart, Dalmeny, Ont.	32·43	67·57	2·17	3·21	0·88	.....	.....	.....	.....	
.....		"	.....	257	Robt. Hill, Richmond, Ont. ....	37·45	62·55	2·85	4·55	1·03	.....	.....	.....	.....	Excess water.
April 19		"	.....	258	Herman Bullis, Foster, P.Q. ....	32·48	67·52	1·74	2·58	0·85	.....	.....	.....	.....	
"	13	"	.....	259	F. H. Wagener, Foster, P.Q. ....	34·07	65·93	1·41	2·14	0·80	.....	.....	.....	.....	
"	2	"	.....	260	Abel Gould, Lombardy, Ont. ....	32·48	67·52	1·50	2·22	0·63	.....	.....	.....	.....	
"	3	"	.....	261	Ed. J. Colquhoun, Russelldale, Ont.	34·29	65·71	1·45	2·21	0·60	.....	.....	.....	.....	
"	15	"	.....	262	Jno. Kelland, Kirkton, Ont. ....	32·48	67·52	1·89	2·80	0·60	.....	.....	.....	.....	
"	14	"	.....	263	Henry Page, Warden, Ont. ....	31·52	68·48	1·26	1·90	0·51	.....	0·74	0·52	0·22	
.....		"	.....	264	Geo. Boyer.....	30·44	69·56	2·46	3·54	0·70	.....	.....	.....	.....	
April 13		"	.....	265	N. W. Chamberlain, West Bolton, P.Q.	30·20	69·80	1·64	2·35	0·87	.....	.....	.....	.....	
.....		"	.....	266	Jno. Robert, South Stukely....	32·26	67·74	1·72	2·54	0·68	.....	.....	.....	.....	
.....		"	.....	267	Henry Bissette, St. Ann's, P.Q.	32·03	67·97	1·95	2·87	0·63	.....	.....	.....	.....	
April 13		"	.....	268	W. D. Inglis, Foster, P.Q. ....	32·48	67·52	1·30	1·93	0·66	1·57	0·69	0·49	0·20	
.....		"	.....	269	R. S. Allen, South Stukely, P.Q.	32·72	67·28	1·97	2·93	0·60	.....	.....	.....	.....	
April 20		"	.....	270	S. G. Bowker, Warden, P.Q. ....	30·90	69·10	1·81	2·62	0·56	.....	.....	.....	.....	
.....		"	.....	271	L. J. Marsh, Sweetsburg, P.Q. ....	30·67	69·33	1·60	2·31	0·67	.....	.....	.....	.....	
April 22		"	.....	272	H. A. Blunt, Knowlton, P.Q. ....	31·59	68·41	1·94	2·84	0·71	.....	.....	.....	.....	
"	11	"	.....	273	" " " " " " " " " " " "	33·39	66·61	2·70	4·05	0·97	.....	.....	.....	.....	
.....		"	.....	274	W. H. Knowlton, South Stukely, P.Q.	33·62	66·38	1·76	2·65	1·09	.....	.....	.....	.....	
.....		"	.....	275	C. B. Benham, Sweetsburg, P.Q.	32·48	67·52	2·00	2·96	0·88	.....	.....	.....	.....	
.....		"	.....	276	F. G. Johnston, West Bolton, P.Q.	31·59	68·41	1·62	2·37	0·97	.....	.....	.....	.....	
.....		"	.....	277	E. A. Duboyce, Foster, P.Q. ....	56·56	63·44	1·91	3·01	1·04	.....	.....	.....	.....	Excess water.



BULLETIN No. 228 - EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.		
				Moisture.	Solids.	Lead Sub- tate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.						
							Lead Sub- acetate ppt.	Malic Acid, value.		p. c.	p. c.	p. c.	Total.		Water Soluble.	Insoluble.
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
April 12	Maple Syrup.....	278	Irwin Williams, Frost Village, P.Q.	31.59	68.41	1.28	1.88	0.71	.....	0.72	0.43	0.29				
" 10	" .....	279	H. E. Phelps, Foster, P.Q....	32.29	67.71	1.61	2.38	0.87	.....	.....	.....	.....				
" 20	" .....	280	Chas. Dempsey, Vernon, Ont.	31.21	68.19	1.77	2.60	0.87	.....	.....	.....	.....				
" 13	" .....	281	F. Desmarais, Warden, P.Q..	31.58	68.42	1.06	1.66	0.54	0.79	0.55	0.24	.....	Clarified with eggs.			
" 18	" .....	282	W. M. Witcher, West Bolton, P.Q.	31.12	68.88	2.61	3.79	0.88	.....	.....	.....	.....				
.....	" .....	283	M. F. Goddard, Waterloo, P.Q.	31.12	68.88	1.49	2.23	0.77	.....	.....	.....	.....				
April 2	" .....	284	C. F. Goddard, Foster, P.Q..	30.90	69.10	1.34	1.94	0.68	.....	0.76	0.48	0.28				
" 10	" .....	285	J. M. Sweet, Foster, P.Q....	31.58	68.42	2.13	3.11	0.86	.....	.....	.....	.....				
.....	" .....	286	W. J. Major, West Bolton, P.Q.	34.74	65.26	2.02	3.10	0.65	.....	0.96	0.51	0.45				
.....	" .....	287	Fred. Whitehead, South Stukely, P.Q.	34.97	65.03	1.53	2.35	0.75	.....	0.79	0.49	0.30				
April 26	" .....	288	Henry Goddard, South Stukely, P.Q.	31.12	68.88	2.28	3.31	0.76	.....	0.94	0.51	0.43				
" 28	" .....	289	W. R. Peters, South Stukely, P.Q.	33.40	66.60	1.98	2.97	0.79	.....	0.90	0.54	0.36				
.....	" .....	290	E. S. Hastings, Iron Hill, P.Q.	31.35	68.65	2.02	2.94	0.91	.....	1.00	0.45	0.55				
April 27	" .....	291	H. J. True, Frost Village, P.Q.	39.04	60.96	2.63	4.31	0.87	.....	1.08	0.33	0.75	Excess water.			



[illegible]



BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Subce- tate ppt	Calculated on dry Substance.			Lead number, Winton Method.	Ash.			
							Lead Sub- acetate ppt.	Malic Acid, value.	Total.		Water Soluble.	Insoluble.		
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
April 21	Maple Syrup. ....	317	Asa Johnston, Cowansville, P.Q.	31.13	68.87	1.49	2.16	0.78	.....	.....	0.75	0.48	0.27	
" 15	" .....	318	J. G. Edwards, Brome, P.Q. .	30.90	69.10	1.65	2.39	0.68	.....	.....	0.84	0.49	0.35	
" 21	" .....	319	A. J. Marsh, Sweetsburg. ....	39.25	60.75	2.22	3.65	1.00	..	...	0.95	0.39	0.56	Excess water.
Mch. 30	" .....	320	J. G. Edwards, Brown's Cor- ners.	31.67	68.43	1.62	2.37	0.70	.....	.....	0.87	0.55	0.32	
April 14	" .....	321	H. S. Vail, Brome, P.Q. ....	31.13	68.87	1.57	2.28	0.56	.....	.....	.....	.....	.....	
" 8	" .....	322	A. J. Hawley, Sutton Junc- tion, P.Q.	31.81	68.19	2.28	3.34	0.90	.....	.....	.....	.....	.....	
.....	" .....	323	— Ryan, Sutton Junction, P.Q.	32.43	67.57	1.98	2.93	0.83	.....	.....	.....	.....	.....	
April 21	" .....	324	Walter Tracy, Brome, P.Q. ...	31.35	68.65	1.75	2.55	0.81	.....	.....	.....	.....	.....	
.....	" .....	325	" " .....	30.66	69.33	1.60	2.31	0.62	.....	.....	.....	.....	.....	
" 21	" .....	326	Walter Tracy, Brome, P.Q. ....	30.90	69.10	1.66	2.40	0.87	.....	.....	.....	.....	.....	
" 21	" .....	327	Taylor & Mason, Iron Hill, P.Q.	32.03	67.97	1.82	2.68	0.68	.....	.....	.....	.....	.....	
" 21	" .....	328	C. C. Jenne, Brome, P.Q. ....	34.31	65.69	2.78	4.23	0.76	.....	.....	.....	.....	.....	
" 18	" .....	329	E. W. Roy, Brome, P.Q. ....	30.20	69.80	2.21	3.17	0.79	.....	.....	.....	.....	.....	
" 15	" .....	330	Jas. Patten, Brome, P.Q. ....	31.12	68.88	1.36	1.98	0.71	.....	.....	0.75	0.51	0.24	







BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Subac- tate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.				
							Lead Sub- acetate ppt.	Malic Acid. value.		Total.	Water Soluble.	Insoluble.		
													p. c.	
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
April 10	Maple Syrup.	356	Jos. Robinson, Molesworth, Ont.	32.98	67.02	2.29	3.42	1.15						
" 14	"	357	W. Grainger, Molesworth, Ont.	33.39	66.61	1.55	2.33	0.88						
" 11	"	358	C. E. Richard, Brome, P.Q.	32.43	67.57	1.64	2.43	0.91						
" 6	"	359	C. B. Moffatt, Wroxeter, Ont.	31.59	68.41	1.80	2.63	0.92						
" 13	"	360	Stewart Bros., Molesworth, Ont.	37.46	62.54	1.59	2.54	1.05					Excess water.	
" 11	"	361	C. C. Jenne, Brome, P.Q.	32.26	67.74	2.10	3.10	0.93						
" 21	"	362	C. C. Pope, Wroxeter, Ont.	30.20	69.80	2.60	3.72	1.03						
Mch.	"	363	Jas. A. Edgar, Wroxeter, Ont.	33.17	66.83	2.27	3.40	1.03						
April 15	"	364	G. E. Vernal, Brome Centre, P.Q.	33.03	67.97	1.49	2.19	0.80						
" 22	"	365	J. G. Hayward, Brome, P.Q.	31.12	68.88	1.50	2.18	0.86						
" 21	"	366	E. M. Palmer, Brome, P.Q.	36.55	63.45	2.15	3.39	0.92					Excess water.	
" 12	"	367	David Kirby, Brome, P.Q.	37.45	62.55	1.67	2.67	1.00					Excess water	
" 21	"	368	Jas. S. Frizzle, Brome, P.Q.	31.12	68.88	1.88	2.73	0.98						
" 21	"	369	J. T. Johnston, Brome, P.Q.	32.49	67.51	1.67	2.47	0.99						
" 15	"	370	E. M. Palmer, Brome, P.Q.	34.29	66.71	1.45	2.21	0.94						



[illegible]



3 GEORGE V., A. 1913

BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.											Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Sub- tate ppt.	Calculated on dry Substance.		Lead number, Winton Method.	Ash.					
							Lead Sub- acetate ppt.	Malic Acid, value.		Total.	Water Soluble.	Insoluble.			
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
April 21	Maple Syrup.....	396	John Stoddard, Magog. ....	29.55	70.45	3.23	4.59	0.82	.....	1.19	0.66	0.53			
" 22	" .....	397	D. Goyette, St. Valerien. ...	31.13	68.87	3.28	3.31	0.85	.....	.....	.....	.....			
....	" .....	398	C. R. Ruter, Smith's Mills, P.Q.	34.31	65.69	2.66	4.05	0.82	.....	.....	.....	.....			
April 15	" .....	399	David Kirby, Brome, P.Q. ....	49.68	50.32	1.82	3.62	0.97	.....	.....	.....	.....		Great excess water.	
" 21	" .....	400	P. P. Brainard, Boynton, P.Q.	25.41	74.59	2.27	3.04	0.35	.....	1.04	0.54	0.50		Malic acid low.	
" 20	" .....	401	O. A. Brock, Glenn Sutton, P.Q.	29.99	70.01	1.71	2.44	0.68	.....	1.00	0.69	0.31			
" 15	" .....	402	P. Bernier, St. Dominique de Bagot.	32.26	67.74	2.00	2.95	0.60	.....	.....	.....	.....			
" 15	" .....	403	H. Chagnon, St. Hyacinthe, P.Q.	30.67	69.32	1.79	2.58	0.88	.....	.....	.....	.....			
" 22	" .....	404	E. Westover, Brome, P.Q. ....	31.36	68.64	2.18	3.18	0.90	.....	.....	.....	.....			
.....	" .....	405	G. H. Gove, Smith's Mills, P.Q.	39.93	60.07	2.24	3.73	1.16	.....	.....	.....	.....		Excess water.	
April 21	" .....	406	J. L. Harvey, Iron Hill, P.Q.	30.32	69.78	1.77	2.54	1.11	.....	0.99	0.63	0.36			
" 21	" .....	407	J. W. Brenner, Boynton, P.Q.	30.22	69.78	2.29	3.28	0.93	.....	.....	.....	.....			
" 23	" .....	408	Edmond Vien, St. Thomas D'Aquint.	30.53	70.47	2.34	3.32	0.92	.....	1.14	0.69	0.45			
" 19	" .....	409	C. R. Ruter, Smith's Mills, P.Q.	30.43	69.57	1.86	2.67	0.90	.....	.....	.....	.....			



## SESSIONAL PAPER No. 14

"	21	"	.....	410	N. G. Danis, Glenn Sutton, P.Q.	30.44	69.56	1.43	2.06	0.84	.....	0.90	0.69	0.21
"	22	"	.....	411	C. E. Rhicard, Brome, P.Q...	31.12	68.88	2.14	3.11	0.85	.....	.....	.....	.....
"	15	"	.....	412	Jos. Forward, Katevale, P.Q..	32.03	67.97	2.30	3.38	0.86	.....	.....	.....	.....
"	19	"	.....	413	.....	34.52	65.48	1.88	2.87	0.97	.....	.....	.....	.....
"	22	"	.....	414	Geo. J. Casavant, St. Pie de Bagot.	31.35	68.65	1.64	2.39	0.84	.....	.....	.....	.....
May	1	"	.....	415	Clark Hall, Sweetsburg, P.Q..	32.48	67.52	2.55	3.78	0.74	.....	.....	.....	.....
.....	.....	"	.....	416	M. E. Owens, Brome, P.Q....	30.44	69.56	1.94	2.79	1.06	.....	.....	.....	.....
.....	.....	"	.....	417	Jos. Allaire, St. Ours, P.Q....	30.43	69.57	2.06	2.96	0.83	.....	.....	.....	.....
April	19	"	.....	418	A. O. Bish, Glenn Sutton, P.Q.	30.90	69.10	1.44	2.08	0.78	.....	.....	.....	.....
.....	.....	"	.....	419	C. Cleche, Beauce, Sample 1..	31.12	68.88	2.64	3.83	0.90	.....	.....	.....	.....
.....	.....	"	.....	420	" " 2..	28.62	71.38	4.68	6.56	1.06	.....	.....	.....	.....
.....	.....	"	.....	421	" " 3..	28.40	71.60	1.99	2.78	0.78	.....	.....	.....	.....
April	20	"	.....	422	Blake & Son, South Stukeley..	31.80	68.20	1.46	2.14	0.86	.....	.....	.....	.....
"	1	"	.....	423	Inspector Talbot, No. 48331..	30.44	69.56	1.54	2.21	0.76	.....	0.86	0.56	0.30
"	1	"	.....	424	" " 48332..	32.48	67.52	1.60	2.37	0.65	.....	.....	.....	.....
"	1	"	.....	425	" " 48333..	34.68	65.22	1.66	2.55	0.71	.....	.....	.....	.....
"	1	"	.....	426	" " 48334..	32.49	67.51	1.03	1.53	0.72	1.25	0.70	0.45	0.25
"	1	"	.....	427	" " 48335..	36.34	63.66	1.42	2.23	0.75	.....	0.76	0.54	0.22
"	1	"	.....	428	" " 48336..	29.99	70.01	1.56	2.23	0.50	.....	.....	.....	.....
"	1	"	.....	429	" " 48337..	31.84	68.16	2.38	3.60	0.94	.....	.....	.....	.....
"	1	"	.....	430	" " 48339.	33.16	66.84	1.67	2.50	1.02	.....	.....	.....	.....
"	1	"	.....	431	" " 48340..	31.59	68.41	1.67	2.44	1.06	.....	.....	.....	.....
"	1	"	.....	432	" " 48341..	31.57	68.43	1.72	2.51	0.86	.....	.....	.....	.....
"	1	"	.....	433	" " 48342..	31.80	68.20	2.22	3.25	0.77	.....	.....	.....	.....
"	19	"	.....	434	Alph. Boulette, Mont St. Hilaire.	30.43	69.57	2.28	3.28	0.57	.....	.....	.....	.....



BULLETIN No. 228—EXAMINATION OF MAPLE SYRUP, SAMPLES SUPPLIED BY MAKERS UNDER  
DECLARATION OF GENUINENESS, SEASON 1911.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Manufacturer.	RESULTS OF ANALYSIS.										Remarks and Opinion of the Chief Analyst.
				Moisture.	Solids.	Lead Sub- sate ppt.	Calculated on dry Substance.			Lead number, Winton Method.	Ash.			
							Lead Sub- sate ppt.	Malic Acid, value.	p. c.		Total.	Water Soluble.	Insoluble.	
1911.				p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
April 12	Maple Syrup.....	435	Mr. Leare, L. Avenir.....	30.90	69.10	1.61	2.33	0.50	.....	.....	0.87	0.54	0.33	
May. 25	"	i.	G. H. Loosie, Burgessville, P.Q.	38.32	61.80	.....	3.58	0.35	2.38	.....	0.74	0.55	0.19	Excess water, malic acid low.
" 25	"	ii.	J. R. McCrease, Burgessville, P.Q.	34.40	65.60	.....	2.98	0.39	2.31	.....	.....	.....	.....	Malic acid, low.
" 25	"	iii.	J. Jacques, Burgessville, P.Q.	33.82	66.18	.....	3.41	0.43	2.31	.....	0.75	0.51	0.24	
" 25	"	iv.	J. C. Skinner, Burgessville, P.Q.	35.68	64.32	.....	3.51	0.40	2.36	.....	.....	.....	.....	Excess water.
" 25	"	v.	H. A. Griswold, Burgessville, P.Q.	35.08	64.92	.....	3.15	0.30	2.29	.....	0.78	0.57	0.21	Malic acid, low.
" 25	"	vi.	Sydney Fiddy, Hallbrook, Ont.	41.20	58.80	.....	3.14	0.44	2.28	.....	.....	.....	.....	Excess water.
" 25	"	vii.	W. Briggs, Hallbrook, Ont. ...	34.38	65.62	.....	3.06	0.32	1.98	.....	0.70	0.56	0.14	Malic acid, low.
" 25	"	viii.	Elgin Birch, Hallbrook, Ont. ...	36.82	63.18	.....	3.09	0.64	2.01	.....	.....	.....	.....	Excess water.
" 25	"	ix.	Powley Addison, Hallbrook, Ont.	38.72	61.28	.....	2.60	0.58	2.31	.....	.....	.....	.....	"
" 25	"	x.	Cecil Chambers, Hallbrook, Ont.	36.88	63.12	.....	2.94	0.39	2.26	.....	.....	.....	.....	"
" 25	"	xi.	Albert Rocket, Hallbrook, Ont.	33.36	66.64	.....	2.21	0.36	2.18	.....	...	.....	.....	Malic acid, low.
" 25	"	xii.	J. R. Woodwin, Beaconsfield, Ont.	37.14	62.86	.....	2.74	0.68	2.31	.....	.....	.....	.....	Excess water.
" 25	"	xiii.	Stephen Hopkins, Beaconsfield, Ont.	36.48	63.52	.....	3.63	0.53	2.10	.....	.....	.....	.....	"



SESSIONAL PAPER No. 14

"	25	"	"	...	xiv.	W. Potter, Beachville Road, Woodstock, Ont.	34.64	65.36	...	3.23	0.46	2.21	...	...	...	...
"	25	"	"	...	xv.	Edwin Wand, New Durham, Ont.	32.86	67.14	...	3.10	0.44	2.16	...	...	...	...
"	25	"	"	...	xvi.	J. E. Rice, New Durham, Ont.	35.22	64.78	...	3.13	0.54	2.30	...	...	...	...
"	25	"	"	...	xvii.	J. Kam, Woodstock, Ont....	34.26	65.74	...	2.82	0.38	2.17	0.72	0.52	0.20	Malic acid, low.
"	25	"	"	...	xviii.	E. T. Chambery, Oxford Centre, Ont.	28.14	71.82	...	3.44	0.47	2.08	...	...	...	...
"	25	"	"	...	xix.	Fred. Hewitt, Zenda, Ont....	37.68	62.32	...	3.28	0.44	2.34	...	...	...	Excess water.
"	25	"	"	...	xx.	R. Denver, Zenda, Ont.....	37.44	62.56	...	3.13	0.64	2.33	...	...	...	"
"	25	"	"	...	xxi.	W. Sager, Vandicar, Ont....	33.62	66.38	...	3.10	0.60	2.25	...	...	...	...
"	25	"	"	...	xxii.	Ed. Reidhead, Eastwood, Ont.	37.44	62.56	...	3.06	0.51	2.24	...	...	...	Excess water.
"	25	"	"	...	xxiii.	Luke Gilholm, Bright, Ont....	35.74	64.28	...	3.70	...	2.25	...	...	...	"
"	25	"	"	...	xxiv.	W. Derbyshire, Norwich, Ont.	31.76	68.24	...	3.61	...	2.15	...	...	...	...
Oct.	10	"	"	...	A.	J. Y. Williams, Wisbeach, Ont.	33.17	66.83	...	1.91	0.63	...	0.92	...	...	Hard maple sap. See sample 176.
"	10	"	"	...	B.	"	30.44	69.56	...	1.85	0.57	...	0.83	...	...	Hard maple sap.
"	10	"	"	...	C.	"	31.36	68.64	...	1.38	0.56	...	0.85	...	...	"
"	10	"	"	...	D.	"	33.62	66.38	...	2.44	0.51	...	0.96	...	...	"



APPENDIX E.

BULLETIN No. 229—OLIVE OIL.

OTTAWA, October 24, 1911.

W J. GERALD, Esq.  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to forward you herewith a report upon the examination of 152 samples of Olive Oil, purchased by our inspectors throughout Canada in April of this year. Of this number 139 samples are found to be genuine, and 13 samples are adulterated under the terms of the Act. The adulteration consists in every case of an admixture of Cotton Seed Oil, ‘an inferior or cheaper substance’ (Sec. 3 (b), without declaration of this fact (Sec. 3 (d).

It appears from correspondence had with importers and vendors, that in some cases this article has been sold in good faith, as believed to be genuine Olive Oil. It is imported for the most part, in sealed containers, and apparently represented as Olive Oil. While this fact seems to exculpate the immediate vendors from any charge of intent to defraud, it does not warrant me in describing the samples as other than adulterated under the Act.

Olive Oil has been collected and examined on four different occasions, with the following results :—

Bulletin.	Date.	Total Samples.	Genuine.	Adulterated	Doubtful.	Sold as Salad Oil.
67.....	1889	75	40	30	5	—
111.....	1905	108	66	16	2	24
159.....	1908	82	64	15	—	3
229.....	1911	152	139	13	—	—

Percentage of adulteration, 40, 15, 18 and 8.

It is gratifying to note that the percentage of adulteration is greatly reduced since 1889, when the first inspection was made.

It is right also to point out that as concerns healthfulness there is no case against well refined Cotton Seed Oil as a food substance, either alone or in admixture. Adulteration consists in the sale of the article under a name which properly belongs to another food material.

The following standards for Olive Oil are respectfully recommended for further study, with reference to legalization, under Section 26 of the Adulteration Act. It is to be noted that, except in the last particular, they do not take into consideration the quality of the oil ; but only its genuineness as regards specific identity.



SESSIONAL PAPER No. 14

## PROPOSED STANDARDS FOR OLIVE OIL.

*Olive Oil*, is entirely a product of the fruit of the Olive tree.

Its specific gravity at  $15.5^{\circ}$  centigrade, is not less than 0.9140, nor more than 0.9196.

Its specific refractive index at  $15.5^{\circ}$  C. is not less than 1.4700 nor more than 1.4718.

Its Maumene number varies from 42 to 52.

Its iodine absorption number (using the Hübl solution) lies between 77 per cent and 94 per cent.

Its saponification (Kœttstorfer) number lies between 185.0 and 195.0.

It does not contain above 3.5 per cent of free fatty acids.

I beg to recommend the publication of this report as Bulletin No. 229.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst*



BULLETIN No. 229—OLIVE OIL.

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Refractive index at 15° C.	Iodine number.	Nitric Acid Colour test.	Halphen's Colour test.		

DISTRICT OF NOVA SCOTIA R. J. WAUGH, INSPECTOR.

1911.	April 18 Olive Oil.	42261	O. Lyons, Kentville, N.S.	3 bots.	75	Crosse & Blackwell, London, Eng.	Unknown		1.4701	Green.		42261	Genuine.
"	"	42262	W. Low & Co., Yarmouth, N.S.	"	54	"	Manufacturers.	Pure Lucca oil.	1.4703	"		42262	"
"	"	42263	Yerxas, Yarmouth, N.S.	"	45	"	"		1.4693	"		42263	"
"	"	42264	R. F. Guest, Yarmouth, N.S.	1 pt.	50	Cagnoli, Nice, Italy	E. Allan, Yarmouth, N.S.	Sold as Lucca oil	1.4705	"		42264	"
"	"	42265	Nat. Drug. & Chem. Co., Halifax, N.S.	1 "	35	Unknown	N. D. & C. Co., Montreal.		1.4707	"		42265	"
"	"	42266	Bauld Bros., Halifax, N.S.	3 bots.	88	Fratelli Alfonso, Lucca, Italy.	Reiss & Brady, New York.	Sold as Lucca oil	1.4700	"		42266	"
"	"	42267	Wentzells, Ltd., Halifax, N.S.	3 "	75	Gaillard & fils, France.	Manufacturers.	"	1.4705	"		42267	"
"	"	42268	J. Rawley, N.S.	1 pt.	60	Unknown	N. D. & C. Co., Halifax, N.S.		1.4708	"		42268	"
"	"	42269	C. E. Huggins, fax, N.S.	1 "	50	Gaillard & fils, France.	Wentzells, Ltd., Halifax, N.S.		1.4702	"		42269	"
"	"	42270	M. D. Logan, N.S.	1 "	50	Unknown	N. D. & C. Co., Halifax, N.S.		1.4701	"		42270	"



SESSIONAL PAPER No. 14

DISTRICT OF PRINCE EDWARD ISLAND—THEO. MOORE, INSPECTOR.

April 6	Olive Oil.	46031	J. G. Jamieson, Charlottetown.	Char-	1 pt.	50	J. B. & A. Artand, freres, Marseille.			1 4701	Green.	46031	"
" 6	"	46032	G. E. Hughes, Charlottetown.	Char-	1 "	50	Société des Huiles d' Olive, Nice, France.			1 4700	"	46032	"
" 6	"	46033	A. Galis & Co., Charlottetown.	Char-	1 "	45	Crosse & Blackwell, London, Eng.			1 4699	"	46033	"
" 7	"	46034	Johnson & Johnson, Charlottetown.	Johnson,	1 "	50	A. Guio & Cie, Aix en Provence.			1 4699	"	46034	"
" 10	"	46035	J. C. Ferguson, Souris.	Souris.	1 "	50		Nat. Drug Co., Halifax, N.S.		1 4699	"	46035	"
" 11	"	46036	Matthew & McLean, Souris.	McLean,	1 "	45		E. Lazenby & Sons, London.	Finest Lucea oil.	1 4699	"	46036	"
" 24	"	46037	Dr. McLeod, Hunter River.	Hunter	1 "	50		Ingram & Bell, Montreal.		1 4705	"	46037	"
" 24	"	46038	Keir & McFadyen, Kensington.	McFadyen,	1 "	50		N. C. Polson, Montreal.		1 4701	"	46038	"
" 25	"	46039	McFadyen & McLeelan, Summerside.	McLeelan,	1 "	50	Schoder & Schyler of, Bordeaux, France.			1 4698	"	46039	"
" 25	"	46040	A. W. P. Gourlie, Summerside.	Gourlie,	1 "	50	Florette & Gueorippi, Italy.			1 4738	Brown.	46040	Adulterated

DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Mch. 29	Olive Oil.	45454	Northrup & Co., John, N.B.	Co., St. John,	3 bots.	70	Tessier frere, France.		"Talos" Brand	1 4705	Green.	45454	Genuine.
" 31	"	45455	G. K. Bell, N.B.	St. John,	1 pt.	50		Nat. Drug. & Chem. Co., Ltd., St. John, N.B.	Olympia	1 4703	"	45455	"
" 31	"	45456	E. Clinton Brown, John, N.B.	St. 1 "	50	50	Tessier frere, France.		Talos	1 4702	"	45456	"
April 4	"	45457	W. Hawker & Son, John, N.B.	St. 1 "	85	85		Nat. Drug. & Chem. Co., Ltd., St. John, N.B.	Na-Dru-Co.	1 4705	"	45457	"
" 10	"	45458	Chas. A. Burchill, Fredericton, N.B.	Burchill,	1 "	60	Warrick frere, France.		Huile d'Olive	1 4706	"	45458	"
" 10	"	45459	Geo. T. Whelpley Esq., Fredericton, N.B.	Whelpley Es-	3 bots.	75	Layenby & Son, Ltd., London, Eng.		Surfine.	1 4707	"	45459	"
" 11	"	45460	The Baird Co., Woodstock, N.B.	Baird Co., Ltd.,	1 pt.	50	Société des Huiles d'Olive, de Nice, France.		Huile de Provence Surfine.	1 4705	"	45460	"



BULLETIN No. 229—OLIVE OIL.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report (Is not an expression of Opinion.)	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Refractive index at 15° c.	Iodine number.	Nitric Acid Colour test.	Halphen's Colour test.		

DISTRICT OF NEW BRUNSWICK J. C. FERGUSON, INSPECTOR—Concluded.

1911.	April 19	Olive Oil..	45461	B. J. Sharp, Sussex, N.B.	1 pt.	70	Nat. Drug. & Chem. Co., Ltd., St. John, N.B.	Na - Dru - Co. Brand.	1.4707	Green...	.....	45461	Genuine.
"	20	"	45462	Fairweather Bros. Moncton, N.B.	1 "	75	Lymans Ltd., Montreal.	Sample from Can labelled A. Guiot & Cie, Aix en Provence, France.	1.4707	"	.....	45462	"
"	22	"	45463	The McCarthy Drug Co., Bathurst, N.B.	1 "	60	The Canadian Drug Co., Ltd., St. John, N.B.	Vestal Oil. Huile d'Olive Vierge. S. S. Schroder & Schryfers, Bordeaux, France.	1.4709	"	.....	45463	"

DISTRICT OF QUEBEC—F. X. W. E. BELAND, INSPECTOR.

Mch. 28	Olive Oil.	36911	J. B. Morin, 318½ Rue St. Joseph, Quebec.	1 pt.	40	Gerard Jolie, France.	Unknown	.....	1.4704	Green	.....	36911	Genuine.
"	"	36912	O. Lacroix, 19 Rue St. Joseph, Quebec.	1 "	40	Abosamoa Kouri, Montreal.	Manufacturer	.....	1.4719	94 Brown..	Red..	36912	Adulterated
"	"	36913	L. E. Martel, 19 Rue St. Joseph, Quebec.	1 "	40	Unknown	Nat. Drug Co., Montreal.	.....	1.4704	Green...	.....	36913	Genuine.
"	"	36914	W. Brunet, et Cie, 139 Rue St. Joseph, Quebec.	1 "	40	Gerard Jolie, France.	Unknown	.....	1.4699	"	.....	36914	"



SESSIONAL PAPER No. 14

April 5	"	36915	Arthur Drolet, 714 Rue 1 St. Valier, Quebec.	"	40	Henri Etienne, Boulle, Mars.	Laporte & Mar- tin, Montreal.	.....	1 4707	.....	"	.....	36915	"
" 5	"	36916	Hamel & Bedard, 528 1 Rue St. Valier. Que- bec.	"	57	Henri Etienne, Boulle, Marseille.	N. Rioux & Cie, Quebec.	.....	1 4699	.....	"	.....	36916	"
" 6	"	36917	Alphonse Martineau, 1 734 Rue St. Valier, Quebec.	"	50	Gerard Jolie, aix de Nice, France.	Dr. Ed. Morin et Cie.	.....	1 4701	.....	"	.....	36917	"
" 7	"	36918	Joseph Masson, 808 Rue 1 St. Valier, Quebec.	"	60	Nat. Drug. Co., Montreal.	Manufacturers. .	.....	1 4699	.....	"	.....	36918	"
" 7	"	36919	" " " " " "	"	80	Gerard Jolie aix de Nice, France.	Dr. Ed. Morin et Cie.	.....	1 4699	.....	"	.....	36919	"
" 11	"	36920	A. E. Francoeur, 379 1 Rue St. Jean, Que- bec.	"	50	Unknown .....	Lyman, Knox Co., Montreal.	.....	1 4739	107 Brown..	Red..	.....	36920	Adulterated

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

April 24	Olive Oil..	38923	A. C. Trempe, Sorel	1 pt..	50	L. A. Price, Lucca, Nice, Bordeaux.	.....	.....	1 4699	.....	Green..	.....	38923	Genuine.
" 25	"	38924	A. E. D'Artois & fils, Farnham.	1 " ..	45	Adolphe P u g e t, Marseilles.	.....	.....	1 4705	.....	"	.....	38924	"
" 26	"	38925	L. Marceau, St. Jean	1 " ..	60	F. Bertolli, Lucca, Italie.	.....	.....	1 4704	.....	"	.....	38925	"
" 27	"	38926	N. Mitchell & Co., Granby.	3 bots.	75	.....	Crosse & Black- well.	.....	1 4701	.....	"	.....	38926	"
May 2	"	38927	J. O. Montplaisir, Drummondville.	1 can.	5	A. Puget, Marseilles	.....	.....	1 4701	.....	"	.....	38927	"
" 2	"	38928	Robinson & Tenny, Waterloo.	3 bots.	7	.....	Crosse & Black- well.	.....	1 4699	.....	"	.....	38928	"
" 4	"	38929	A. H. Moore & Co., Magog.	3 " ..	7	.....	Nat. Drug & Na- Chem. Co., Ltd., brand. Montreal.	.....	1 4701	.....	"	.....	38929	"
" 5	"	38930	V. Archambault, E. Sherbrooke.	3 " ..	75	.....	Holbrook & Co., Nice.	.....	1 4699	.....	"	.....	38930	"
" 8	"	38931	La Cie S. Bourgeois Inc., St. Hyacinthe.	1 qt..	80	Talbot & frere, Bor- deaux, France.	.....	.....	1 4704	.....	"	.....	38931	"
" 10	"	38932	Denault & freres, As- bestos.	3 bots.	1 35	H. Etienne Boville, Marseilles.	.....	.....	1 4701	.....	"	.....	38932	"

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Mar. 27	Olive Oil..	40621	Sylvio Choquet, 153 1 Amherst st., Montreal	1 pt..	50	.....	Hudon, Hébert & Cie, Ltd., Montreal.	.....	1 4702	.....	Green..	.....	40621	Genuine.
" 27	"	40622	H. R. Gray, 198 St. 1 Lawrence B., Mont- real.	1 " ..	75	.....	.....	.....	1 4701	.....	"	.....	40622	"



BULLETIN No. 229—OLIVE OIL.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Refractive index at 15°C.	Iodine number.	Nitric Acid Colour test.	Halphen's Colour test.		

DISTRICT OF MONTRÉAL—J. J. COSTIGAN, INSPECTOR—Concluded.

1911.													
Mar. 27	Olive Oil.	40623	J. Pigeon, 412 Notre Dame W., Montreal.	1 pt.	50			1.4709		Gr		40623	Genuine.
April 13	"	40624	H. E. Archambault, 781 Notre Dame E., Montreal.	"	50		Imported	1.4700		"		40624	"
" 17	"	40625	Chas. Lippen, 427 Wellington st., Montreal.	1 " "	70			1.4740	104	Brown.	Red.	40625	Adulterated
" 19	"	40626	G. W. Porcheron, 1024 St. Lawrence B., Montreal.	1 " "	40			1.4701		Green		40626	Genuine.
" 19	"	40627	Louis Wemfeld, 1112 St. Lawrence B., Montreal.	1 " "	75		Laporte-Martin Cie, Ltd.	1.4697		"		40627	"
" 19	"	40628	Dr. Leduc et Cie, 1181 St. Lawrence B., Montreal.	1 " "	60			1.4702		"		40628	"
" 19	"	40629	Dr. Prevost, 662 St. Denis st., Montreal.	1 " "	75			1.4699		"		40629	"
" 19	"	40630	J. E. Migeron, 540 St. Denis st., Montreal.	1 " "	50			1.4705		"		40630	"

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.

Mar. 31	Olive Oil.	43221	D. J. Stalker, druggist, Ottawa.	16 oz.	50	Nat. Drug & Chem Co. Ltd., Ottawa	Tim labelled guaranteed absolutely pure.	1.4707		Green.		43221	Genuine.
" 31	"	43222	T. Payment, druggist, Ottawa.	18 " "	75	A. Guioet & Cie, France.	Ottawa Drug Co., Ottawa.	1.4707		"		43222	"



SESSIONAL PAPER No. 14

"	31	"	43223	Beattie & Argue, druggists, Ottawa.	18 "	75 A. Guiot & Cie, France.	T. Chamberlain & Co., Prescott.	1-4725	103 Brown.	Red.	43223	Adulterated
14 April	1	"	43224	A llen & Cochrane, druggists, Ottawa.	20 "	90 Gaillard		Imported by vendors.	1-4704	Brown.	43224	Genuine.
1	1	"	43225	N. W. Campbell, druggist, Ottawa.	18 "	75 A. Guiot & Cie, France.	Ottawa Drug Co., Ottawa.		1-4724	97 Brown.	43225	Adulterated
"	3	"	43226	O. C. Abbott, druggist, Smith Falls.	18 "	75 F. Bertelli, Lucca, Tuscany, Italy.	Drug Trading Co., Toronto.	Guaranteed absolutely pure.	1-4703	Green.	43226	Genuine.
"	3	"	43227	The A. B. Scott & Co., Smith Falls.	3 bots.	75 Liptons, Ltd., London, Eng.	Robertson Nicolle & Co., Smith Falls.		1-4699	"	43227	"
"	5	"	43228	C. A. Ramshaw, druggist, Arnprior.	3 "	75 Nat. Drug & Chem. Co.	Manufacturers.		1-4704	"	43228	"
"	5	"	43229	J. Chambers, druggist, Arnprior.	18 oz.	75 Nat. Drug & Chem. Co.	"	Labelled absolutely pure.	1-4703	"	43229	"
"	7	"	43230	C. Whitney & Son, Prescott.	3 bots.	75 H. E. Boule, Mar-seilles, France.	Laporte Martin & Cie, Montreal.	Minerva Brand, guaranteed pure	1-4699	"	43230	"

DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Mar.	24	Olive Oil.	47756	T. Hoag, Kingston.	1 pt.	50	N. C. Polson, Kingston.	1-4697	Green.	47756	Genuine.
"	24	"	47757	C. S. Prouse, Kingston	1 "	60	N. C. Polson, Kingston.	1-4699	"	47757	"
"	24	"	47758	A. P. Chown, Kingston	1 "	60	Lymans, Ltd., Montreal.	1-4730	99 Brown.	47758	Adulterated
"	24	"	47759	W. W. Gibson, Kingston.	1 "	60	N. C. Polson, Kingston.	1-4699	Green.	47759	Genuine.
"	24	"	47760	N. C. Polson, Kingston	1 "	50	Société des Huiles d'Olive de Nice, France.	1-4704	"	47760	"
"	27	"	47761	J. S. McKeown, Belleville.	1 "	50	Lymans, Ltd., Montreal.	1-4725	110 Brown.	47761	Adulterated
"	27	"	47762	D. M. Waters, Belleville.	1 "	60	Lymans, Ltd., Montreal.	1-4725	97 "	47762	"
"	28	"	47763	McDermid & Jury, Peterboro.	1 "	75	N. C. Polson, Kingston.	1-4699	Green.	47763	Genuine.
"	28	"	47764	Warne Drug Co., Peterboro.	1 "	75	Société des Huiles d'Olive de Nice, France.	1-4701	"	47764	"
"	28	"	47765	Geo. Watson, Hope.	1 "	75	Nat. Drug Co., Toronto.	1-4704	"	47765	"



BULLETIN No. 229—OLIVE OIL.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of Opinion).	RESULTS OF ANALYSIS.				Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Refractive index at 15°c.	Iodine number.	Nitric Acid, Colour test.	Halphen's Colour test.	
						Manufacturer.	Furnisher.					

DISTRICT OF TORONTO H. J. DAGGER, INSPECTOR.

1911.	April	Olive Oil.	47275	T. J. Mundy, Penetang	1 pt.	60	Drug Trading Sold as pure olive oil.	1.4706		Green.		47275	Genuine.
"	"	"	47276	J. A. Breens, Pharmacy, 216 Queen st. E., Toronto.	1 "	40	Lynan Bros. & Co., Ltd., Toronto.	1.4723	97	Brown.	Red.	47276	Adulterated
"	"	"	47277	G. Lamblyn, Ltd., Yonge st., Toronto.	1 "	40	A. Jeffrey, Toronto.	1.4699		Green		47277	Genuine.
"	"	"	47278	S. T. Flopper, College st., Toronto.	1 "	50	Holbrook's, Ltd., Toronto.	1.4701		"		47278	"
"	"	"	47279	F. W. McLean, Queen st., Toronto.	1 "	60	The Drug Trading Co., Ltd., Toronto.	1.4705		"		47279	"
"	"	"	47280	G. E. Gibbard, 1871 Dundas st., Toronto.	1 "	70	Labelled olive oil G. E. Gibbard, dispensing chemist.	1.4701		"		47280	"
"	"	"	47281	A. C. Thompson, 890 Dundas st., Toronto.	1 "	50	Saunders & Evans, Toronto.	1.4706		"		47281	"
"	"	"	47297	J. D. Morrison, Bay st., Hamilton.	1 "	40	The Drug Trading Co., Ltd., Toronto.	1.4702		"		47297	"
"	"	"	47298	A. E. Drewery, Jas. st., Hamilton.	1 "	50	Unknown.	1.4703		"	.....	47298	"
"	"	"	47299	Hawkins, Ltd., 117 John st. South, Hamilton.	1 "	40	Nat. Drug & Chem. Co., Ltd., Hamilton.	1.4702		"		47299	"



DISTRICT OF LONDON—JNO. TALBOT, ACTING INSPECTOR.

14	April 25	Olive Oil.	18001	Alex. Stewart, Guelph. 3 bots.	75		Nat. Drug Co., Hamilton.	14706	Green.	18001	Genuine.
1	"	"	18003	J. B. Broadfoot, Guelph 3 "	75		Drug Trading Co., Toronto.	14699	"	48003	"
1	"	"	18009	E. O. Ritz & Co., Berlin 3 "	75		Holbrook & Co., London, Eng.	14697	"	48009	"
	"	"	18011	J. H. Schmidt, Berlin 3 "	75	Unknown.	Unknown.	14702	"	18011	"
	"	"	18020	Fred C. Bond, Galt. 3 "	65		Lyman Bros., Toronto.	14697	"	48020	"
	"	"	18022	A. M. Edwards, Galt 3 "	45		Martini & Co., Lucca, Italy.	14702	"	48022	"
	"	"	48028	L. H. Cant, Galt. 3 "	50		Nat. Drug Co., Hamilton.	14707	"	48028	"
	"	"	48397	A. B. Petrie, Guelph 3 "	75		Lyman Bros., Toronto.	14730	Brown.	48397	Adulterated
	"	"	48400	W. H. Beattie, Guelph 3 "	60			14702	Green.	48400	Genuine.

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR.

April 19	Olive Oil.	48357	W. T. Rapley, Strathroy.	3 bots.	50		Nat. Drug Co., London.	14699	Green.	48357	Genuine.
"	"	48359	W. H. Stepler, Strathroy.	3 "	50		W. T. Polson, Toronto.	14699	"	48359	"
"	"	48362	H. E. Perrott, Brantford.	3 "	60		R. S. McIndoe, Toronto.	14697	"	48362	"
"	"	48365	R. M. Roddick, Brantford.	3 "	60		Nat. Drug Co.	14702	"	48365	"
"	"	48369	M. H. Robertson, Brantford.	3 "	75	J. B. & A. Artand, Marseille, France		14697	"	48369	"
"	"	48370	P. Cancelllo, Brantford.	3 "	85	Specuzza and Sansone, Italy.		14701	"	48370	"
"	"	48374	F. G. Walley, Ingersoll.	3 "	65		E. G. West, Toronto.	14740	Brown.	48374	Adulterated
"	"	48379	J. E. Gayfer, Ingersoll.	3 "	90		Drug Trading Co., Toronto.	14699	Green.	48379	Genuine.



BULLETIN No. 229—OLIVE OIL.

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				Quantity.	Cents.			Refractive index at 15°C.	Iodine number.	Nitric Acid Colour test.	Halphen's Colour test.		

DISTRICT OF WINDSOR—JNO. TALBOT, INSPECTOR—Concluded.

1911.													
April 21	Olive Oil.	48380	A. Marello, Ingersoll.	3 bots.	70		Cattelano, London, Ont.	1.4695		Green		48380	Genuine.
" 21	"	48383	D. Carmello, Ingersoll.	3 "	75	Unknown	Unknown	1.4692		"		48383	"

DISTRICT OF MANITOBA—A. C. LARIVIERE, INSPECTOR.

April 12	Olive Oil.	43583	McCullough's Drug Store, Winnipeg.	3 bots.	1.20			Virgin Olive Oil 1.4705		Green		43583	Genuine.
" 12	"	43584	The Gordon Mitchell Drug Co., Winnipeg.	1 pt.	75	Vendors		Beaunard Brand. Salon Olive Oil. 1.4701		"		43584	"
" 12	"	43585	F. Braund, Winnipeg.	1 "	75	Societe des Huiles d'Olive, de Nice.	N. C. Polson, Kingston.	Huiled Olive 1.4699		"		43585	"
" 12	"	43586	Austins Drug Store, Winnipeg.	1 "	75	"	"	Surfine Extra. 1.4699		"		43586	"
" 12	"	43587	The Clarendon Pharmacy, Winnipeg.	1 "	75	Nat. Drug & Chem. Co. of Canada, Ltd.	Manufacturers.	Nat. Drug Co. 1.4704		"		43587	"
" 12	"	43588	H. D. Campbell, Winnipeg.	1 "	1.00	Societe des Huiles d'Olive, de Nice.	N. C. Polson, Kingston.	Surfine Extra. 1.4699		"		43588	"
" 12	"	43589	Rogers Drug Store, Winnipeg.	1 "	80	A. Guiot & Cie, aix en Provence.		Huile d'Olive 1.4730	102	Brown. Red.		43589	Adulterated
" 12	"	43590	"	1 "	80	"		Extra fine quality. 1.4710		Green		43590	Genuine.
" 13	"	43591	Connell & Co., Winnipeg.	1 qt.	1.25	Meyer Bros. Drug Co., St. Louis, U.S.		Maltese Cross 1.4704		"		43591	"
" 13	"	43592	Poyntz & Co., Winnipeg.	1 pt.	75	A. Guiot & Cie, aix en Provence.		Qualitic Vierge 1.4699		"		43592	"



DISTRICT OF NELSON—THOS. PARKER, INSPECTOR.DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

April 25	Olive Oil	38165	Independent Drug Store, Main St. Vancouver, B.C.	75	Fraser & Dick Vancouver.	1.4699	Green	38165	Genuine.
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BULLETIN No. 229—OLIVE OIL

Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analyses.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
				Quantity.	Cents.			Refractive index at 15° c.	Iodine number.	Nitric Acid Colour test.	Halphen's Colour test.		

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR. *Concluded.*

1911.	April 25	Olive Oil.	38166	Mount Pleasant Pharmacy, Main St., Vancouver.	3 bots.	45	J. A. Teepoorten, Vancouver.	1.4699				38166	Genuine.
"	"	"	38167	Broadway Pharmacy, Granville St., Vancouver.	3 "	50	A. Guiot, France	1.4701		"		38167	
"	"	"	38168	Harrison's Drug Store, Granville St., Vancouver.	3 "	75	Caneva & Soci, Genoa, Italy.	1.4997		"		38168	
"	"	"	38169	Ferguson's Drug Store, Granville St., Vancouver.	3 "	75	J. Vitucci & Co., Italy.	1.4707		Green		38169	"
"	"	"	38170	Woods Pharmacy, Hastings St., Vancouver.	3 "	1 05	Unknown.	1.4701		"		38170	"
"	"	"	38171	E. S. Knowlton, Hastings St., Vancouver.	3 "	75	W. P. Morris & Co.	1.4699		"		38171	"
"	"	"	38172	Central Drug Store, Cordova St., Vancouver.	3 "	1 05	J. La Tour & Cie, France.	1.4707		"		38172	"
"	"	"	38173	A. & C. Grocery, Granville St., Vancouver.	3 "	75	Crosse & Blackwell, London, Eng.	1.4699		"		38173	"
"	"	"	38174	J. F. May, Granville St., Vancouver.	"	90	Schroder & Schyler, Bordeaux, France.	1.4701		"		38174	"



## SESSIONAL PAPER No. 14

## DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

May	5	Olive Oil.	47565	Windsor Grocery Co., 1 pt. Victoria, B.C.	90	American Olive Co. Los Angeles, Cal.	Pure olive oil.	1·4699	Green	47565	Genuine.
"	5	"	47566	D. H. Ross & Co., Vic- toria, B.C.	65	Jas. P. Laugel, France.	Virgin olive oil.	1·4700	"	47566	"
"	5	"	47567	"	50	Fratelli Alphonso, Lucca, Italy.	Olis d'Olive Sop- rafino.	1·4700	"	47567	"
"	5	"	47568	"	85	J. E. Kubras, Red- lands, Cal.	Bohemian Club Brand.	1·4704	"	47568	"
"	5	"	47569	"	50	Crosse & Blackwell, London, Eng.	Pure Lucca oil.	1·4704	"	47569	"
"	5	"	47570	West End Grocery Co., 1 Ltd., Victoria, B.C.	65	"	Olio Soprafino Extra.	1·4703	"	47570	"
"	5	"	47571	"	65	"	Huile d'Olive Surfine Extra.	1·4699	"	47571	"
"	11	"	47572	Harrison & McDonald, 1 Ltd., Victoria, B.C.	50	"	Map of Italy pure olive oil.	1·4704	"	47572	"
"	11	"	47573	Copas & Young, Vic- toria, B.C.	65	"	Nicelle Olive Oil pure olive oil.	1·4699	"	47573	"
"	11	"	47574	H. O. Kirkham, Vic- toria, B.C.	50	"	Guaranteed pure olive oil.	1·4703	"	47574	"



## APPENDIX F.

## BULLETIN No. 230—HEADACHE POWDERS.

OTTAWA, December 6, 1911.

W. J. GERALD, Esq.,

Deputy Minister of Inland Revenue.

SIR,—I beg to submit herewith a report upon one hundred and fifty (150) samples of patent or proprietary medicines, purchased throughout the Dominion as Headache Powders, in April of this year. Each sample has been worked in duplicate, using two of the dozen powders usually supplied in a package. The report therefore represents three hundred (300) distinct analyses.

In most cases the duplicates are very similar, as regards the content of the potent drug; indicating thereby care in their preparation. In a few instances, the duplicate powders show considerable variation in the amount of the potent drug contained.

The last collection of articles of this kind was made in June, 1905, and the results of their examination are contained in Bulletin No. 113. At that time thirty samples (30) were examined, and all but two (2) were found to contain acetanilide (Antifebrin) as the effective component. This drug continues to find the greatest vogue in these powders, and is found in one hundred and eighteen samples (118) of the present collection: in a few cases associated with phenacetin, but usually alone, as the effective component of the powder. Phenacetin is present, as chief ingredient, in twenty-four samples, (24) while eight (8) samples contain aspirin (acetosalicylic acid) a drug which is not scheduled by the Proprietary or Patent Medicine Act.

The drugs chiefly used in these powders are known to the medical profession, to pharmacy and to chemistry by other names than those by which they are known to the public. Acetanilide and Antifebrin are the popular names of the first named drug; but phenylacetamide and acetyl-amidobenzene are technical synonyms. Phenacetin is also known as para-acetphenetidin or para-oxyethylacetanilide. When declaration of the presence of a drug is made on the label as required by Section 7 of the Proprietary or Patent Medicine Act, this is for the purpose of informing the public, and it is reasonable to expect that the common name of the drug should be used. To employ a synonym of technical import only, is as effectively to disguise the presence of the drug



## SESSIONAL PAPER No. 14

as the omission of the name altogether for most people. I would suggest that a departmental ruling be made so as to make compulsory the employment on the label of the commonly accepted names of drugs. I would also draw attention to the fact that the statement of the presence of acetanilide is often included in a considerable mass of reading matter, so that it requires some care and time to ascertain if present or not. I think that the name of the potent drug should be prominently indicated.

Section 7 of the Proprietary or Patent Medicine Act requires that declaration of the presence of either acetanilide or of phenacetin should be made on the label unless an affidavit has been filed specifying the amount of such drug present, and limiting this amount to a maximum which shall satisfy the Minister of Inland Revenue of the harmlessness to health of such maximum. The medical advisers of the Hon. the Minister have fixed this amount at 2 grains for acetanilide and 5 grains for phenacetin. In none of the powders containing phenacetin does the amount present exceed 5 grains.

Of powders in which acetanilide is the chief ingredient, sixty-two (62) declare the presence of the drug, and are therefore within the protection of the Act, even though the amount contained is higher than the limit (2 grains) considered safe by our medical advisers. Twenty-seven (27) samples do not declare the presence of the drug, and do not contain any notable excess of it. Eleven (11) samples contain notable excess, without statement of the fact of its presence, but are protected by having a stamp upon them, being thus designated as old stock, and not amenable to the penalties of the Act, if properly stamped. (Circular G. 843). Fifteen (15) samples contain the scheduled drug in excess, without having any declaration of its presence upon the label, and without being stamped and are therefore amenable to the penalties fixed by Section 12 of the Proprietary or Patent Medicine Act.

Eighty-eight (88) samples of the one hundred and fifty (150) herein reported, make distinct claim to curative powers. In most cases these claims cover headache, neuralgia, nausea, insomnia and many other ills; sometimes the claim is strengthened by addition, of such words as "Sure," "Certain," "Instantaneous," &c. All such claims are unwarranted, and are misleading. They constitute misdescription or misbranding; and this should be made a punishable offence under the Act.

## ACETANILIDE POWDERS.

In twenty-seven (27) samples containing this drug without declaration of its presence and judged as meeting the claims of the Proprietary or Patent Medicine Act, inasmuch as the permitted amount of two (2) grains is not materially exceeded, the actual mean content of acetanilide in each powder is 2.03 grains.

Of sixty-two (62) samples containing acetanilide, with notification of this fact on the label, the actual mean amount of the drug in each powder is 4.1 grains; being above 5 grains in 19 samples, and above 6 grains in 9 samples.



3 GEORGE V., A. 1913

That the Proprietary or Patent Medicine Act has caused greater care to be taken in dispensing of this dangerous drug may be inferred from the record of seven samples of old stock ; that is stock in possession of the retail dealer at the time the Act came into force, and permitted to be sold if stamped in such a way as to show that they are not subject to the control of the Act.

The samples referred to are as follows :—

	Powder No. 1.	Powder No. 2.
No. 46014 .....	5·1	5·5
“ 46018 .....	6·4	6·1
“ 36392 .....	4·9	4·3
“ 47254 .....	4·2	4·9
“ 48023 .....	5·1	5·5
“ 43582 .....	5·9	6·4
“ 47257 .....	4·4	4·1
Mean .....	5·1	5·2

This appears to indicate that before the passage of the Act, headache powders were freely sold, containing an average amount of 5 grains of acetanilide, without statement of the presence of the drug, or any hint of the quantity present.

Fifteen (15) samples contain more than 2 grains of acetanilide without declaration of the presence of the drug, and without a stamp to show them to be stock held prior to the passage of the Proprietary or Patent Medicine Act. The vendors of these samples are amenable to the penalties fixed by Section 12 of the Act.

I subjoin a list of the samples just referred to.

Number.	ACETANILIDE.		Mean.	EXCESS. Over 2 Grains.
	(1)	(2)		
36391 .....	4·9	5·0	4·95	2·95 grains.
36397 .....	3·7	4·6	4·15	2·15 “
36399 .....	4·1	3·6	3·85	1·85 “
38901 .....	3·7	4·3	4·00	2·00 “
38909 .....	4·8	4·6	4·70	2·70 “
40631 .....	3·7	3·5	3·60	1·60 “
40633 .....	2·3	2·3	2·30	Phenacetin also present.
43202 .....	5·5	6·1	5·80	3·80 grains.
43208 .....	5·5	6·2	5·85	3·85 “
47751 .....	3·8	—	3·80	1·80 “
47252 .....	4·0	—	4·00	Phenacetin also present.
48358 .....	5·4	4·8	5·10	3·10 grains.
47256 .....	4·5	5·4	4·95	2·95 “
47261 .....	6·6	5·9	6·25	4·25 “
38140 .....	3·5	3·3	3·40	1·40 “

In one or two cases I have found these headache preparations to be put up in the form of lozenges or chocolates. This appears to me to be a dangerous innovation. A



## SESSIONAL PAPER No. 14

drug so potent as a heart depressant as acetanilide or phenacetin should not be disguised in lozenge form. It is sufficiently dangerous to warrant every precaution against excessive use.

I beg to recommend the publication of this report as Bulletin No. 230.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



3 GEORGE V., A. 1913

BULLETIN No. 230—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cost.	Manufacturer.	Furnisher.	
DISTRICT OF NOVA SCOTIA—								
1911.								
April 18	Headache Wafers.	42276	J. D. Clark, Kentville, N.S.	1 box.	25	N. D. & C. Co., Halifax, N.S.	Manufacturers.	Na-Dru-Co. Headache Wafers. National Drug and Chemical Co. of Canada, Ltd. They contain no morphine, opium or other poisonous drugs. No. 591 The Proprietary or Patent Medicine Act.
"	20 Headache Powders	42277	J. A. Craig, Yarmouth, N.S.	3 pkg.	30	F. G. Wheaton & Co., Ltd., Folly Village, N.S.	"	"Kumfort" Headache Powders give prompt relief in headache, neuralgia or pain attending La Grippe. These powders contain acetanilide, mfg. by F. G. Wheaton Co., Ltd., No. 123 Proprietary or Patent Medicine Act. 4 Doses. Price 10 cents.
"	20 "	42278	B. F. Trask, Yarmouth, N.S.	1 box.	25	Toronto Pharmacal Co., Toronto, Ont.	"	Trask's Headache Powders. B. F. Trask, Druggist, Yarmouth, N. S. 1051 Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick or nervous, headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits.
"	24 Headache Wafers.	42279	Nat. Drug & Chem. Co., Halifax, N.S.	3 "	25	Vendors .....	.....	Description like 42276.
"	24 Headache Powders	42280	Brown Bros. & Co., Halifax, N.S.	3 "	30	F. G. Wheaton & Co., Amherst, N.S.	Manufacturers.	Description like 42277.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.		
Soak the wafer in water until soft, then place in the mouth and swallow with drink of water. The dose may be repeated in half an hour if necessary. For rheumatic pains. Take one wafer three times a day.	Powder No. 1. . . .	5.3	None.	None.	None.	42276	Apparently contains aspirin (aceto-salicylic acid). Meets requirements of P. or P. Act.
	" " 2. . . . .	6.7					
Directions.—Children under 10 years give $\frac{1}{3}$ of a powder; ten to fifteen years, $\frac{1}{2}$ a powder. For adults, one powder, repeated in half an hour if needed. Place powder on the tongue and take a swallow of water.	Powder No. 1. . . . .	8.6	3.3	" . .	" . .	42277	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2. . . . .	6.3	2.2				
Directions.—Take one powder dry on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible, do not repeat needlessly.	Powder No. 1. . . . .	8.5	1.7			42278	Claim curative effects; otherwise meets requirements of P. or P. Act.
	" " 2. . . . .	8.5	1.7				
.....	Powder No. 1. . . . .	4.7	None.	None.	.....	42279	Apparently contains aspirin (aceto-salicylic acid) meets requirements of P. or P. Act.
	" " 2. . . . .	5.6	" . .	" . .	.....		
.....	Powder No. 1. . . . .	5.1	1.9	" . .	None.	42280	Meets requirements of P. or P. Act. Acetanilide declared.
	" " 2. . . . .	5.9	2.3	.....	.....		

R. J. WAUGH, INSPECTOR.



3 GEORGE V., A. 1913  
BULLETIN No. 230—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF NOVA SCOTIA—								
1911.								
April 25	Headache Powders	42281	J. Rawley, Halifax, N.S.	3 pkg.	30	T. Milburn & Co., Toronto, Ont.	N. D. & C. Co., Halifax, N.S.	Milburn Sterling Headache Powders Cure. Nervous sick and bilious headaches, cold in the head, neuralgia, etc. They are absolutely harmless in their action and leave no unpleasant after effect. The T. Milburn Co., Ltd., Toronto. Each powder contains 5.866 grains of acetanilide. No. 71 The Proprietary or Patent Medicine Act.
25	"	42282	C. E. Huggins, 3 Halifax, N.S.	"	30	Toronto Pharmaceutical Co., Toronto.	Manufacturers.	Perfect Headache Powders, (St. Andrews Drug Store), C. E. Huggins, Halifax, N.S. No. 1442 The Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick and nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits.
25	"	42283	M. D. Logan, 3 Halifax, N.S.	"	30	T. Milburn & Co., Toronto.	N. D. & Co., Halifax, N.S.	Described like No. 42281.
25	Headache Wafers	42284	A. A. Thompson, 1 box, Halifax, N.S.	1 box.	25	Zymole Co., New York.	Manufacturers.	S. H. A. C. Stearns' Headache Cure. Each wafer contains one grain of caffeine alkaloid and three grains of pure acetanilide, intimately mixed. A speedy relief for headaches of all origin whether sick, bilious, nervous or hysterical, also a great re-



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.		

R. J. WAUGH, INSPECTOR—Continued.

Directions. — For children from 5 to 10 years $\frac{1}{4}$ to $\frac{1}{3}$ of a powder, 10 to 15 years $\frac{1}{2}$ to $\frac{2}{3}$ of a powder, according to age. Adults, 1 powder. Place the powder on the tongue and take a swallow of water, or the powder may be dissolved in a little water before taking. If necessary repeat the dose in 30 minutes.	Powder No. 1.....	14.3	6.2	.....	42281	Claim curative properties. Presence of acetanilide declared. The amount is excessive in the opinion of medical advisers of the Department. Meets requirements of P. or P. Act.
	" " 2.....	13.9	6.1	.....		
Directions—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	11.0	1.9	.....	42282	Claims curative properties. Meets requirements of P. or P. Act.
	" " 2.....	9.5	1.7	.....		
.....	Powder No. 1.....	15.3	6.5	.....	42283	See remarks under 42281. Meets requirements of P. or P. Act acetanilide declared.
	" " 2.....	13.8	5.9	.....		
Directions.—Place one wafer (the regular adult dose) in a glass of water until thoroughly softened and swallow it with a drink of water. If at the end of an hour relief is not obtained, another wafer may be taken, but not more than two wafers should be taken in succession. The wafer should be	The following is printed on a circular enclosed in the box, S. H. A. C. Stearns' Headache Cure. Headaches of all kinds yield quickly to Stearns' Headache Cure. The same is true of allied pains such as neuralgia, la grippe, sciatica, rheumatism, lum-	8.2	3.7	.....	42284	Called a cure. Acetanilide in slight excess of amount declared on label. Meets requirements of P. or P. Act.
		7.1	3.3	.....		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—

1911.								
April 25								lief in neuralgia. These wafers contain no injurious narcotics and are warranted, free from antipyrine, morphine, chloral or opium. The Zymole Co. Inc., New York City.
	26 Headache Powders	42285	G. A. Burbidge, Halifax, N.S.	3 pkg.	30	Toronto Pharmacal Co., Toronto.	Manufacturers.	Perfect Headache Powders No. 95 Proprietary or Patent Medicine Act. These headache powders are instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain sleeplessness, worry and anxiety, and all forms of depression of spirits.

DISTRICT OF PRINCE EDWARD ISLAND—

April 6	Headache Wafers.	46011	Geo. E. Hughes, Charlottetown, P.E.I.	3 pkg.	75	Sterns & Curtis, New York.		S. H. A. C. Stearns' Headache Cure, Stearns & Curtis, New York, is composed solely of pure phenyl - acetamid, theine and lactose, A speedy relief for headaches of all origin, whether sick, bilious, nervous or hysterical; also a great relief in nenralgia. These wafers contain no injurious narcotics, and are warranted free from antipyrine, morphine, chloral or opium. Stamp on.
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## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.		

R. J. WAUGH, INSPECTOR—*Concluded.*

		p. c.	p. c.	p. c.	p. c.		
taken early in the attack.	bago, colds, etc., in which the effect is to reduce the fever, if present, as well as to relieve the pain. In fact Stearns' Headache Cure is a general pain cure and has been found efficacious even in earache, toothache, etc.						
Directions.—Take one powder dry on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	10.4	2.1	.....	.....	42285	Claimed as a cure.
	" " 2....	11.2	2.0				Meets requirements of P. or P. Act.

THEO. MOORE, INSPECTOR.

Directions.—Place one wafer (the regular adult dose) in a glass of water until thoroughly softened and swallow it with a drink of water. If at the end of an hour relief is not obtained another wafer may be taken, but more than two doses should not be taken in succession. The wafer should be taken as early in the attack as possible.	Powder No. 1.....	8.5	3.7	None.....		46011	Acetanilide is disguised on the label as phenylacetamide. This is in excess of amount allowed without declaration. Technically meets requirements of P. or P. Act. Claims curative properties.
	" " 2.....	8.3	3.5	"			
	The circular enclosed in the box is identical with No. 42284..						



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Addrees of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF PRINCE EDWARD ISLAND—								
1911.								
April 8	Headache Wafers.	46012	Gillis & Sons, Charlottetown, P.E.I.	3 pkg.	75	Nat. Drug & Chem. Co. of Canada.	....	Described like No. 42276.
" 8	Headache Powders.	46013	McKinnon Drug Co., Charlottetown, P.E.I.	3 "	30	United Drug Co., Toronto.	....	Rexall Headache Powders. One ounce of the powder contains 274 grains of acetphenetidin. Each powder contains 5 grains of acetphenetidin. These powders are guaranteed free from antipyrin, opium morphine or chloral. No. 1803 Proprietary or Patent Medicine Act. An immediate relief in neuralgia.
" 10	"	46014	H. J. Mabon, Souris, P.E.I.	3 "	60	Vendor..	.....	Mabon's Headache Powders, H. J. Mabon, druggist, Souris, P.E.I. For sick and nervous headache and neuralgia; also a cure in cases of sudden cold with fever. Taken in a little water they will lower the temperature and induce sleep. Stamp on.
" 11	"	46015	J. C. Ferguson, Souris, P.E.I.	3 "	75	F. G. Wheaton, Folly Village, N.S.	.....	Described like No. 42277.
" 11	Headache Powders	46016	J. S. Chaisson, Souris, P.E.I.	3 pkg.	30	Frasier & Thornton Co., Cookshire, P.Q.	.....	Dr. Stanley's Handy Headache Powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinions of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.		

Continued.

.....	Powder No. 1.....	4.8	None.	None.	None.	46012	Salicylic acid reaction. Apparently aspirin; meets requirements of P. or P. Act.
	" " 2.....	6.3	"				
Dose.—One powder dissolved in a little water. For severe headache repeat the dose once after a lapse of twenty minutes.	Powder No. 1....	5.5	"	Less		46013	Meets requirements of P. or P. Act. Phenacetin disguised as acetphenetidin.
	" " 2....	5.8	"	than 5 grains			
Directions, for headache, one powder repeated in twenty to thirty minutes if necessary. For neuralgia, rheumatic pains, &c.; one powder every two or three hours as required. For sleeplessness and nervousness, one powder on retiring, to be repeated in one hour if sleep is not produced. For children reduce dose according to age. They may be taken dry, on the tongue, followed by a little water.	Powder No. 1.....	18.5	5.1	.....	.....	46014	Claims curative properties. Contain excess of acetanilide, but are protected by a stamp.
	" " 2.....	19.0	5.5				
.....	Powder No. 1.....	13.9	5.5	.....	.....	46015	See 42277. Acetanilide in excess of limit set by medical advisers of the department. Acetanilide declared. Conforms to P. or P. Act.
	" " 2.....	12.5	5.1				
Directions.—Take one powder dry on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	14.6	2.0	None.	None.	46016	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	17.0	2.5	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF PRINCE EDWARD ISLAND—								
1911.								
April 24	Headache Powder.	46017	Keir & McFadyen, Kensington, P.E.I.	3 pkg.	25	Dr. Keir, Kensington.		exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. Frasier, Thornton & Co. Cookshire, P. Q., No. 212 Proprietary, or Patent Medicine Act.
" 25	"	46018	P. N. Euman, Summerside.	3 "	30	Toronto Pharmacal Co., Ltd., Toronto		Keir's Headache Powders. For headache, neuralgia and feverish condition. Each powder contains acetanilide 4½ grains in combination with caffeine, sodium, bi-carbonate and aromatics.
" 25	"	46019	McFadyen & McLellan, Summerside.	3 "	30	F. G. Wheaton & Co., Folly Village, N.S.		Perfect Headache Powders. The Toronto Pharmacal Co., Ltd., Toronto, Montreal and Winnipeg. These headache powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. Stamp on.
" 25	"	46020	J. G. Jamieson, Charlottetown.	3 "	75	T. Milburn & Co., Toronto.		This sample is described like No. 42277.
								This sample is described like No. 42281.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrine, grains.		
<p>Dose for headache. One powder, repeated in thirty minutes if necessary. At least three hours should elapse before another dose is taken a seidlitz powder or other mild laxative should be taken with the first dose. Care should be taken in administering to children. Reduce dose according to age. Dose for sleeplessness one powder on retiring the powders may be taken dry on the tongue followed by a little water.</p> <p>Directions.—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.</p>	Powder No. 1.....	11.8	4.6	None.	None.	46017	Acetanilide declared to extent of 4½ grains. One powder contains excess. Meets requirements of P. or P. Act.
	" " 2.....	15.3	5.8	"	"		
	Powder No. 1.....	15.8	6.4	None.	None.	46018	Curative powers claimed. Acetanilide in excess; protected by stamp.
	" " 2.....	15.0	6.1	"	"		
	Powder No. 1.....	3.9	1.6	None.	None.	46019	Meet requirements of P. or P. Act. Acetanilide declared.
	" " 2.....	4.0	1.6	"	"		
	Powder No. 1.....	12.4	5.6	None.	None.	46020	Curative properties claimed. Meets requirements of P. or P. Act. Acetanilide declared.
	" " 2.....	12.1	5.4	"	"		

Concluded.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF NEW BRUNSWICK—								
1911.								
Mar. 27	Headache Powders	45434	Nat. Drug and Chem. Co., Ltd., St. John, N.B.	3 pkg.	30	The T. Milburn Co., Ltd., Toronto.		This sample is described like No. 42281.
" 29	"	45435	Frank E. Porter, St. John, N.B.	3 "	25	Vendor..		Peerless Headache Powders. For headache, neuralgia and feverish conditions. Each powder contains acetanilide( $4\frac{1}{2}$ grains) in combination with caffeine, sodium bicarbonate and aromatics. Frank E. Porter, prescription druggist, St. John, N.B.
April 3	"	45436	The Canadian Drug Co., Ltd., St. John, N.B.	3 "	20	F. G. Wheaton Co., Ltd., Amherst, N.S.		This sample is described like No. 42277.
" 10	"	45437	Chas. A. Burchill, Fredericton, N.B.	3 "	25	Toronto Pharmacal Co., Ltd., Toronto		This sample is described like No. 46018.
" 11	"	45438	The Baird Co., Ltd., Woodstock, N.B.	3 "		Vendors ..		Bowman's Nerve and Headache Powders. A harmless and effective remedy for headache, nervousness, sleeplessness, feverishness, colds, &c. Each powder contains 3 grains of acetanilide combined with camphor, monobromate and caffeine citrate. The Baird Co., Ltd. Woodstock, N.B.
" 19	"	45439	Geo. M. Fairweather, Sussex, N.B.	3 "	30	Vendor.....		Micmac Headache Powders. Proprietary or Patent Medicine Act, 781. Headache or neuralgia relieved in 10 minutes. Prepared only by Geo. M. Fairweather, druggist, Sussex, N.B.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Direction for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.		

J. C. FERGUSON, INSPECTOR.

.....	Powder No. 1.....	15.6	6.8	None.	None.	45434	See remarks under 42281. Curative powers claimed. Meets requirements of Act. Acetanilide declared.
	" " 2.....	15.8	6.8	"	"		
Dose for headache.—One powder repeated in thirty minutes if necessary. At least three hours should lapse before another dose is taken. A seidlitz powder or other mild laxative should be taken with the first dose. Care should be taken in administering to children. Reduce dose according to age. Dose for sleeplessness, one powder on retiring. The powders may be taken dry on the tongue followed by a little water.	" " 1.....	11.6	4.5	"	"	45435	Complies with requirements of P. or P. Act. Acetanilide declared to 4½ grains.
	" " 2.....	11.9	4.5	"	"		
.....	" " 1.....	3.5	1.3	"	"	45436	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2.....	7.5	3.0	"	"		
.....	" " 1.....	10.3	1.9	"	"	45437	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	10.0	1.8	"	"		
Directions.—Place a powder on the tongue and swallow with some water: repeat the dose in 20 minutes if not relieved.	" " 1.....	7.6	1.9	"	"	45438	Meets requirements of P. or P. Act. Acetanilide declared.
	" " 2.....	5.5	1.7	"	"		
Directions.—Place the powder on the tongue and wash down with a swallow of water. Repeat in 15 minutes if necessary.	" " 1.....	5.4	2.2	"	"	45439	Meets requirements of P. or P. Act.
	" " 2.....	5.2	2.3	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—

1911.								
April 20	Headache Powders	45440	D. E. O. Steeves, 3 pkg. Moncton, N.B.	25		H. K. Wam- pole, Ont.	Perth,	Steeves' Headache Powders. For head-ache, neuralgia and feverish conditions. Each powder contains acetanilide( $4\frac{1}{2}$ grains) in combina-tion with caffeine, sodium bicarbonate and aromatics. Steeves pharmacy, Moncton, N.B.
" 20	"	45441	Acadia Drug Co., 3 Moncton, N.B.	30		Vendors		Ideal Headache Pow-ders No. 819. The Proprietary or Pat-ent Medicine Act. Acadia Drug Co., Moncton, N.B.
" 21	"	45442	Dickison & Troy, 3 Newcastle, N.B.	30		Toronto Phar- macal Co., Ltd., Toronto		Perfect Headache Powders, Dicki-son & Troy, Drug-gists, &c., New-castle, N.B. No. 95, Proprietary or Patent Medicine Act. Prepared by Toronto Pharmacal Co., Ltd. These Headache Powders are an instantan-eous cure for sick or nervous head-ache and neuralgia. They promptly relieve sick stom-ach, exhausted nerves, mental strain, sleepless-ness, worry and anxiety, and all forms of depres-sion of spirits.
" 22	"	45443	The McCarthy Drug Co., Bathurst, N.B.	30		H. K. Wam- pole Co., Ltd., Perth.		Headache Powders for headache, neu-ralgia and feverish conditions. Each powder contains acetanilide ( $4\frac{1}{2}$



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide=Anti-febrin, grains.	Phenacetin, grains.	Phenazone=Antipyrin, grains.		

J. C. FERGUSON, INSPECTOR—Continued.

Dose for headache.—One powder repeated in 30 minutes if necessary. At least three hours should elapse before another dose is taken. A seidlitz powder or other mild laxative should be taken with the first dose. Care should be taken in administering to children. Reduce the dose according to age. Dose for sleeplessness, one powder on retiring. The powders may be taken dry on the tongue followed by a little water.	Powder No.1.....	11·6	4·5	None.	None.	45440	Acetanilide declared up to 4½ grains. One powder in excess of this amount. Meets requirements of P. or P. Act.
	" " 2.....	13·5	5·2	"	"		
Directions.—Place a powder on the tongue and swallow with a draught of water. If not relieved in an hour another powder may be taken.	" " 1.....	14·3	none.	Less than 5 grains	none.	45441	Meets requirements of P. or P. Act.
	" " 2.....	12·9	"		"		
Directions.—Take one powder in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible.	Powder No. 1.....	10·3	2·1	none.	"	45442	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	10·8	2·2	"	"		
Dose for Headache.—One powder repeated in thirty minutes if necessary, at least three hours should elapse before another dose is	Powder No. 1.....	10·9	4·1	"	"	45443	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2.....	11·8	4·6	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer of Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF NEW BRUNSWICK—								
1911.								grains), in combination with caffeine, sodium, bicarbonate and aromatics. The McCarthy Drug Co., Bathurst, N.B.
DISTRICT OF QUEBEC—								
Mar. 28	Headache Powders	36391	J. B. Morin, 318 Rue St. Joseph, Quebec.	3 b'xs.	75		Dr. Ed. Morin & Cie.	Mathieu's Nervine Powders. For headache and neuralgia, contains no opium, morphine or chloral. One powder will relieve and a few powders will cure you. These powders are very good for children cutting their teeth. No. 473. The Proprietary or Patent Medicine Act.
" 28	"	36392	"	3 "	75	The Hoffman Drug Co., Buffalo, N.Y.	"	Hoffman's Harmless Headache Powders, a simple and effective cure for all headaches. We guarantee these powders to contain no opium, quinine, bromides or narcotics. Is not a cathartic. The Hoffman Drug Co., International Bridge, Ont. Canada and Buffalo, N.Y., stamp.
" 30	"	36393	L. E. Martel, 91 Rue St. Joseph, Quebec.	3 box's	30	Toronto Pharmacal Co., Toronto.	Manu- facturers.	This sample is described like No. 46018.
" 30	"	36394	"	3 "	30	F. G. Wheaton Co., Ltd.	W. Brunet & Cie.	This sample is described like No. 42277.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.					Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grain.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.	No. of Sample.	

J. C. FERGUSON, INSPECTOR—Concluded.

taken. A seidlitz powder or other mild laxative should be taken with the first dose. Care should be taken in administering to children. Reduce dose according to age. Dose for sleeplessness, one powder on retiring. These powders may be taken dry on the tongue, followed by a little water.							
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F. X. W. E. BELAND, INSPECTOR.

Directions :—One powder every three hours; however, the dose can be repeated after one hour if not relieved. For children 1 to 2 years old, divide one powder in 12; 3 to 4 years, divide one powder in 8; 5 to 10 years, divide one powder in 4; 10 to 15 years, divide one powder in 2. How to take them: Place a powder on the tongue and drink a little water after.	Powder No. 1.....	6·8	4·9	none.	none.	36391	Curative properties claimed. No declaration of acetanilide—violates requirements of P. or P. Act, acetanilide being in excessive amount.
	" " 2.....	6·9	5·0	"	"		
Directions :—Place a powder on the tongue and swallow with a draught of water. If not relieved in half an hour take another powder.	Powder No. 1. ....	11·5	4·9	"	"	36392	Curative powers claimed. No declaration of acetanilide—violates P. or P. Act, as acetanilide in excessive amount; but is protected by stamp.
	" " 2. ....	9·9	4·3	"	"		
.....	Powder No. 1.....	8·3	1·7	None.	None.	36393	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	8·1	1·7	"	"		
.....	Powder No. 1.....	5·0	2·0	None.	None.	36394	Acetanilide Declared. Meets requirements of P. or P. Act.
	" " 2.....	6·4	2·5	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF QUEBEC—								
1911.								
Mar. 31	Headache Wafers.	36395	W. Brunet & Cie, 139 Rue St. Joseph, Quebec.	3 boxes	50	Lymans, Ltd., Montreal.	Manufacturers.	Lyman's Headache Wafers. A positive cure for sick and bilious, headache and neuralgia. No. 213 The Proprietary or Patent Medicine Act, mfg. by Lyman, Sons & Co., Montreal.
31	"	36396	"	3 "	44	Stearns, Detroit, Mich.		Stearns' Headache Cure. Frederick Stearns & Co, Detroit, Mich., and Windsor, Ont. Is composed solely of phenyl - acetamid, Theine & Lactose. A speedy and certain cure for headaches of all origin, whether sick, bilious, nervous, or hysterical, also a positive relief in neuralgia. These wafers contain no injurious narcotics and are warranted free from antipyrine, morphine, chloral or opium, new style adopted Nov. 1, 1898.
April 6	Headache Powders	36397	Alphonse Martineau, 734 Rue St. Valier, Quebec.	3 "	60	Mathien, Sherbrooke.	Dr. Ed. Morin & Cie.	This sample is described like No. 36391.
6	"	36398	"	3 "	75	Hoffman, Buffalo, N.Y.	"	This sample is described like No. 36392.
7	"	36399	Joseph Masson, 808 Rue St. Valier, Quebec	3 "	60	Mathien, Sherbrooke.	"	This sample is described like No. 36391.
7	"	36400	"	3 "	60	Hoffman, Buffalo, N.Y.	"	This sample is described like No. 36392.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrine, grains.		
Directions;—Soften the wafer by placing it for a moment in a little water, then swallow with a drink of water. If relief be not obtained, a second wafer may be taken half an hour or an hour later.	Powder No. 1.....	5.7	.....	less	.....	36395	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	5.9	.....	than 5 grs.	....		
Directions.—Place the wafer in a glass of water until thoroughly softened (about $\frac{1}{2}$ to 1 minute) and place it in the mouth while soft, swallow with a drink of water. If relief is not obtained repeat in an hour, but more than two wafers should not be taken in succession. The wafer should be taken as early in the attack as possible.	Powder No. 1.....	10.1	4.0	None.	None.	36396	Curative powers claimed. Acetanilide is disguised as phenylacetamide. Technically meets requirements of P. or P. Act.
	" " 2.....	10.4	4.2	"	"		
.....	Powder No. 1.....	5.2	3.7	None.	None.	36397	Curative powers claimed. No declaration of acetanilide which is in excess. Violates P. or P. Act.
	" " 2.....	6.3	4.6	"	"		
.....	Powder No. 1.....	11.8	5.1	None.	None.	36398	Curative powers claimed. No declaration of acetanilide which is in excess. Protected by stamp.
	" " 2.....	11.7	5.1	"	"		
.....	Powder No. 1.....	5.8	4.1	None.	None.	36399	Curative powers claimed. No declaration of acetanilide, which is in excess. Violates P. or P. Act.
	" " 2.....	5.3	3.6	"	"		
.....	Powder No. 1.....	10.0	4.3	None.	None.	36400	Curative powers claimed. No declaration of acetanilide, which is in excess. Protected by stamp.
	" " 2.....	11.1	4.9	"	"		

Continued.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Description as found on the label.
				Quantity.	Cents.	Manufacturer. Furnisher.	

DISTRICT OF ST. HYACINTHE—

1911.							
April 24	Headache Wafers	38901	Bruno & Sylvestre, Sorel.	3 boxes	60	Vendors ....	Roux's Headache Wafers. A speedy, certain and safe cure for headaches of all origins whether sick, bilious, nervous or hysterical; also a positive relief in neuralgia. These wafers contain no injurious ingredients and are warranted free from antipyrine, morphine, chloral and opium. Roux Chemical Co.
24	"	38902	Pharmacie Provost, Sorel.	3 "	50	Lymans, Ltd., Montreal.	Wafers were loose, rolled in paper.
25	"	38903	Dr. O. Demers, West Farnham, P.Q.	3 "	75	Lyman - Knox, Montreal.	Headache Wafers. Each wafer contains phenacetin 4 grains, quinine hydrochlor 2 grains, caffeine 1 grain. A speedy, certain and safe cure for headaches of all origins, whether sick, bilious, nervous or hysterical; also a positive relief in neuralgia. Dr. O. Demers.
25	Headache Pills.	38904	J. B. Comeau, Farnham, P.Q.	3 "	75	F. Stearns & Co., Windsor, Ont.	A. B. C. Headache Pills. Acetanilide, bromide of camphor, caffeine. Safe, pleasant and effective. These pills contain no chloral, opium, antipyrine, morphine or quinine, and will produce no bad effect if taken according to directions. They will be found most useful in all forms of nervous headache, melancholy, neuralgia, la grippe,



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide=Anti-febrin, grains.	Phenacetin, grains.	Phenazone=Anti-pyrine, grains.		

J. C. ROULEAU, INSPECTOR.

Directions.—Place the wafer in a glass of water until thoroughly soaked (about $\frac{1}{2}$ to 1 minute) and place it in the mouth while soft. Swallow with a drink of water. If relief is not obtained, repeat in an hour, but it is not advisable to take more than two wafers in succession. The wafers should be taken as early in the attack as possible.	Powder No. 1.....	3.7	3.7	None.	None.	38901	Curative powers claimed. No declaration of acetanilide, which is in excess. Violates terms of P. or P. Act.
	" " 2.....	4.3	4.3	"	"		
Directions.—Place the wafer in a glass of water until thoroughly softened, then swallow with a little water. Another may be taken in an hour if the first has not given sufficient relief.	" " 1.....	5.4	None.	Less than 5 grains	None.	38902	Contain phenacetin within limits allowed by P. or P. Act.
	" " 2.....	7.1	"	"	"	38903	Cure claimed. Phenacetin within allowed limits.
	" " 1.....	4.8	"	"	"		
	" " 2.....	7.8	"	"	"		
Dose.—Take two or three pills soon as the headache comes on, and if relief is not obtained in the course of an hour, take two more and repeat the dose every six hours as occasion may demand. Weak and delicate persons should take smaller doses. Children from 6 to 12 years of age $\frac{1}{2}$ adult dose.	" " 1.....	5.8	1.2	"	None.	38904	Conform to requirements of P. or P. Act. Acetanilide declared.
	" " 2.....	5.3	1.1	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF ST. HYACINTHE—

1911.								
April 26	Headache Wafers.	38905	P. P. Sabourin, St. Jean.	3 box.	75	The Zymole Co., Inc., New York.		fevers, colds and toothache; also indicated in rheumatism and lumbago. Sleeplessness from any cause is promptly relieved by the proper use of these pills. Dr. J. B. Comeau, chemist and druggist, Farnham, P.Q. This sample is described like No. 42284.
" 26	Headache Pills.	38906	F. C. Saunders, Bedford, P.Q.	3 "	75	F. Stearns & Co., Windsor, Ont.		EAZAKE. A prompt but harmless cure in all forms of headache, neuralgia, la grippe and those pains peculiar to females. F. C. Saunders, druggist, Bedford, P. Q. Each tablet contains 4 grains phenyl acetamide. No. 576 The Proprietary or Patent Medicine Act.
" 27	Headache Wafers.	38907	Dr. J. A. Beaudry, Granby.	3 box.	75	Lyman Sons & Co., Montreal.		This sample is described like No. 36395.
May 4	Headache Cachets.	38908	Dr. Béique, Magog.	3 doz.	75			Cachets were loose rolled in paper.
" 5	Headache Powders	38909	Cie J. S. Mathieu, Sherbrooke	3 box.	Nil.	Vendors		This sample is described like No. 36391.
" 3	"	38918	G.W. Johnston, Sutton.	"	75	Vendor		Up to date Headache Powders.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as und on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti- pyrine, grains.		

*Continued.*

<p>Directions.—Swallow one with a mouthful of water; repeat in <math>\frac{1}{2}</math> an hour if not relieved. Not more than 3 to be taken in succession. They act quicker if crushed to a powder before swallowing.</p>	Powder No. 1.....	9.9	4.0	"	"	38905	Curative powers claimed. Acetanilide in excess of amount stated on label. Meets requirements of P. or P. Act.
	" " 2.....	9.4	3.9	"	"		
	" " 1.....	5.9	3.4	"	"	38906	Curative power claimed. Acetanilide disguised as phenyl-acetamide. Meets terms of P. or P. Act technically.
	" " 2.....	5.7	3.4	"	"		
	Powder No. 1.....	4.8	None.	Less than 5 grs.	None.	38907	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	4.5	"	"	"		
	" " 1.....	9.2	3.9	None.	"	38908	No statement as to registration. Acetanilide too high as undeclared; doubtful.
	" " 2.....	9.2	3.9	"	"		
	" " 1.....	6.9	4.8	"	"	38909	Curative properties claimed. No declaration of acetanilide violates requirements of P. or P. Act.
	" " 2.....	6.8	4.6	"	"		
None.....	" " 1.....	8.7	None.	Less than 5 grs.	"	38918	Phenacetine within limits allowed without declarations.
	" " 2.....	9.4	"	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF MONTREAL—								
1911.								
Mar. 27	Headache Powders	40631	Sylvio Choquet, 153 Amherst St., Montreal.	3 box.	60	Cie J. L. Mathieu, Sherbrooke.		This sample is described like No. 36391.
"	"	40632	"	"	75	Toronto Pharmacal Co.,		This sample is described like No. 46018.
"	Headache Wafers	40633	Quenneville, Guerin & Co., 90 St. Catherine St. East, Montreal.		45			Churchills Anti-migraine Wafers, No. 1461. The Proprietary of Patent Medicine Act. A certain and safe cure for headache arising from neuralgia, fatigue of body or mind, over-eating, alcohol, tobacco, &c. Jubilee Medicine Co., 700 St. Catherine St. East.
"	"	40634	"	"	"			Cachets du Dr. Fred Demers, Montreal, No. 11. The Proprietary or Patent Medicine Act. Contre le mal de tête. Guérison prompte et certaine des névralgies et de tous maux de tête nerveux et bilieux. Ce cachet est inoffensif et supérieur à tous les autres. Para Acetphenetidine and Phenyl. Acetamide.
"	"	40635	"	"	"			Gauvin's Headache Wafers. Recommended by the Medical profession for the cure of headache, neuralgia, grippe, cold in the head and nervousness caused by overwork. The Proprietary or Patent Medicine Act 704. Acetanilide. J. A. E. Gauvin, Montreal.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrine, grains.		

J. J. COSTIGAN, INSPECTOR.

		p. c.	p. c.	p. c.	p. c.		
.....	Powder No. 1.....	5.3	3.7	None.	None.	40631	Curative properties claimed. Violates P. or P. Act.
	" " 2.....	5.0	3.5	"	"		
..	" " 1.....	10.0	2.0	"	"	40632	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	9.9	1.9	"	"		
Place the wafer in a glass of water until softened (about 5 to 10 seconds) and put it in the mouth while soft. Swallowing it with a drink of water. If relief is not obtained in an hour repeat the dose; but not more than two wafers should be taken in succession. The wafers should be taken as soon as possible after the attack begins.	" " 1....	8	2.3	present.	"	40633	Curative powers claimed. Contains maximum acetanilide as well as phenacetine. Violates P. or P. Act.
	" " 2.....	6.7	2.3	"	"		
Directions — Soften the wafer by placing it for a moment in a little water, then swallow with a drink of water. If relief is not obtained a second wafer may be taken half an hour or an hour later, but more than two wafers should not be taken in succession. The wafers should be taken as early as possible in the attack.	" " 1.....	5.7	More than 2 grains	present.	"	40634	Curative properties claimed. Contains both acetanilide and phenacetine which are declared, but by unusual names, on the label.
	" " 2.....	6.2	"	"	"		
Directions — Place the wafer in a tumbler of water for a quarter of a minute to soften, then swallow with a mouthful of water. If relief does not follow, repeat the dose in 20 minutes. In severe cases such as grippe, take one wafer every three hours.	" " 1....	14.8	3.3	"	"	40635	Curative power claimed acetanilide declared. Meets requirements of P. or P. Act.
	" " 2....	13.5	5.6	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF MONTREAL—								
1911.								
Mch. 27	Headache Tablet.	40636	M. Albert, St. Lawrence St., Montreal.	3 box.	75	The Montreal Chemical Co.		Kopvey. A delicious cream for headache. No. 1135 The Proprietary or Patent Medicine Act. Prepared only by the Montreal Chemical Co., Montreal.
" 27	Headache Wafers.	40637	H. R. Gray, 198 St. Lawrence St., Montreal.	3 "	75			Gray's Headache Wafers. For nervous, sick, neuralgic and hysterical headaches. No. 262 The Proprietary or Patent Medicine Act. Henry R. Gray, Chemist, Montreal.
" 27	Headache Powders	40638	The Dr. Leduc Drug Co., Notre Dame West, Montreal.	3 "	25	Vendors		Perfect Headache Powders 630 Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. The Dr. Leduc Drug Co., Reliable Druggists, Montreal.
" 27	"	40639	"	3 "	60	Hoffman Drug Co.		This sample is described like No. 36392.
" 27	Headache Wafers.	40640	J. Pigeon, 412 Notre Dame W., Montreal.	3 "	75	Vendor		Pigeon's Headache Cure. These wafers contain no injurious narcotics and are warranted free from antipyrin, morphine, chloral or opium, J. Pigeon, Chemist, &c., Montreal.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti- pyrine, grains.		

Continued.

Dose.—One chocolate. Repeat in one hour if necessary.	Powder No. 1 . . . . .	63.5	None.	less than 5 grs.	None.	40636	Meets requirements of P. or P. Act.
	" " 2 . . . . .	54.8	"	"	"		
Directions.—Dip the wafers for a few moments in water to soften it, then lay it on the tongue, and swallow with a drink of water. If relief is not obtained in an hour, repeat the dose, not more than two should be taken in suc- cession.	" " 1 . . . . .	17.0	None.	less than 5 grs.	None.	40637	Meets requircments of P. or P. Act.
	" " 2 . . . . .	15.9	"	"	"		
Directions.—Take one powder in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible.	" " 1 . . . . .	9.0	1.7	None.	None.	40638	Curative powers claim- ed. Meets require- ments of P. or P. Act.
	" " 2 . . . . .	10.0	1.8	"	"		
. . . . .	" " 1 . . . . .	10.4	4.2	None.	None.	40639	Curative powers claim- ed. Acetanilide de- declared.
	" " 2 . . . . .	11.0	4.7	"	"		
Directions.—Place the wafer in a glass of water until thoroughly soft- ened (½ to 1 minute) and place it in the mouth while soft, swallow with a drink of water. If relief is not obtained, repeat in an hour, but more than two wafers	" " 1 . . . . .	7.7	2.5	None.	None.	40640	Curative powers claim- ed. Slight excess of acetanilide. Doubt- ful.
	" " 2 . . . . .	8.2	2.7	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer of Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF MONTREAL—								
1911.								
DISTRICT OF OTTAWA—								
Mch. 31	Headache Wafers.	43201	D. J. Stalker, Ottawa.	3 pkts	75	Nat. Drug & Chem. Co., Ottawa.	Manu- facturer.	This sample is described like No. 42276.
" 31	Headache Powders	43202	T. Payment, Ottawa.	,3 "	75	C. H. Gunn & Co., Chatham, Ont.		Miller's Headache and Grip Powders. A quick cure for nervous headache, sick headache, neuralgic pains or pains from any cause, one or two doses will arrest the worst case of sick headache and will cure the most distressing attack of nervous headache. Put up by C. H. Gunn & Co., Chatham, Ont.
" 31	Headache Wafers.	43203	Beattie & Argue, Ottawa.	3 b'xes	75	F. Stearns & Co., Windsor, Ont.	Manu- facturers.	Nyal's Headache Cure, also of great value in neuralgia, la grippe, rheumatism and all allied pains. Each wafer contains one grain of pure alkaloid of caffeine and three grains of pure acetanilid. Nyal's Headache Cure, contains no opiates, such as morphine, and other narcotics and is free from antipyrin chloral and other dangerous drugs. New York and London Drug Co., New York, U.S.A.
Apr. 1	Headache Powders	43204	Allen & Coch- rane, Ottawa.	3 "	75	Vendors . . . . .		The Red Cross Head- ache Powder. Robinson's For- mula. Harmless, prompt, effective, guaranteed to con-



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grain.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phen zone = Anti- pyrin, grains.		

Continued.

should not be taken in succession. The wafers should be taken as early in the attack as possible.							
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J. A. RICKEY, INSPECTOR.

.....	Powder No. 1.....	4·0	None.	None.	None.	43201	Apparently contains aspirin (aceto-salicylic acid).
	" 2.....	4·7	"	"	"		
Dose.—Adults one powder; 5 years $\frac{1}{3}$ of a powder; 8 years $\frac{1}{2}$ , and 12 years $\frac{3}{4}$ of a powder, repeated in one hour if necessary, and if after four hours all pain is not gone, repeat.	Powder No. 1.....	5·9	5·5	None.	None.	43202	Curative powers claimed. Acetanilide in great excess. Violates P. or P. Act.
	" 2.....	6·6	6·1	"	"		
Directions.—Soft en a wafer by dropping it into a glass of water for a moment, then take a swallow of water. The dose may be repeated in one hour if entire relief is not obtained, but not sooner and not more than two in all should be taken.	Powder No. 1.....	7·0	3·1	None.	None.	43203	Curative powers claimed. Meet requirements of P. or P. Act. Acetanilide being declared.
	" 2.....	8·5	3·8	"	"		
One powder on the tongue and swallow with a draught of water. Repeat in a hour if necessary.	Powder No. 1.....	7·9	Less than 2 grains	Less than 2 grains	None.	43204	Meets requirements of P. or P. Act. Acetanilide and phenacatine declared.
	" 2.....	7·9	"	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911.								
								tain no opium, quinine, bromides, or narcotics. Gives immediate relief from headache arising from almost any cause. 166 proprietary or patent medicine act. Acetanilide 2 grains, phenacetine 2 grains. Allen & Cochrane, The Red Cross Druggists, Ottawa, Ont.
April	1	Headache Wafers.	43205	N. W. Campbell, Ottawa.	3 bxs.	75	F. Stearns & Co., Windsor, Ont.	..... This sample is described like No. 42284.
"	3	" ..	43206	W. Johnston, Smith's Falls.	3 " ..	75	Hoffman Drug Co., International Bridge, Ont.	Lyman's, Ltd., Montreal.
"	3	" ..	43207	L. M. Dockrill, Smith's Falls.	3 " ..	75	Toronto Pharmaceutical Co., Toronto.	Manu- facturer. Perfect Headache Powders. F. M. Dockrill, Phm.B., Druggist, &c., Smith's Falls, Ont. Cafferine soda bicarb, acetanilide, 2 grains in each powder. These headache Powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and forms of depression of spirits.
"	5	Headache Tablets.	43208	S. E. Johnston, Arnprior.	3 " ..	75	Herald Remedy Co., Montreal.	Hedrite cures headache. Pleasant, harmless, speedy relief. The Herald Remedy Co., Chicago, Montreal.
"	7	Headache Powders.	43209	W. H. Raney, Prescott.	3 " ..	75	United Drug Co., Ltd., Toronto.	Mann- facturers. This sample is described like No. 46013.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- dergrains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrin, grains.		

Continued.

.....	Powder	No. 1. ....	7·8	3·5	none.	none.	43205	Curative powers claim- ed. Acetanilide in slight excess of amount declared.
	"	No. 2. ....	8·3	3·8	"	"		
.....	"	No. 1. ....	10·8	4·6	"	"	43206	Curative powers claim- ed. Protected by stamp.
	"	No. 2. ....	10·3	4·8	"	"		
Directions:—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not re- lieved. Take as early in the attack as pos- sible. Do not repeat needlessly.	"	No. 1. ...	12·7	2·4	"	"	43207	Curative powers claim- ed. Meets require- ments of P. or P. Act. Acetanilide declared.
	"	No. 2. ....	9·4	1·9	"	"		
Directions:—Place the lozenge on the tongue and swallow with a drink of water.	"	No. 1. ....	10·9	5·5	"	"	43208	Curative powers claim- ed. Great excess of acetanilide violates terms of P. or P. Act.
	"	No. 2. ....	11·3	6·2	"	"		
.....	"	No. 1. ....	6·5	none.	Less than 5 grs.	"	43209	Meets requirements of P. or P. Act.
	"	No. 2. ....	7·0	"	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911.								
April 7	Headache Powders.	43210	S. E. Mills, 3 bxs. Prescott.		75	The Chemists of Canada.	Manu- facturers.	The Chemists' Head- ache Powders No. 90, the Proprietary or Patent Medicine Act. Quickly cures headache and relieves neuralgia, safe and efficient, are harmless, pleasant to the taste, easily taken. These powders are an effective cure for headache and neuralgia. They are efficient and prompt in their action, without disturbing the stomach or nervous system. The Chemists' Co. of Canada, Ltd., Hamilton, Toronto, Winnipeg. These powders contain acetanilide combined with caffeine. They do not contain any opium, morphine, quinine, bromide or any narcotic.

DISTRICT OF KINGSTON—

Mar. 24	Headache Wafers.	47746	F. Hoag, Kings- ton.	3 pkg.	75	Stearns, New York.	.....	This sample is described like No. 42284.
" 24	Headache Powders.	47747	C. S. Prouse, 3 Kingston.	" "	25	Vendor..	.....	Prouse's Headache Powders. These headache powders are a safe and effective cure for sick and nervous headache and neuralgia. No. 1773 The Proprietary or Patent Medicine Act.



## HEADACHE POWDERS

*Concluded.*

JAS. HOGAN, INSPECTOR.

.....	Powder No. 1.....	8·1	3·5	None.	None.	47746	Called a cure. Acetanilide in slight excess of amount declared on label.
	" No. 2.....	8·1	3·5	"	"		
Directions.—Place the powder on the tongue and swallow with a draught of water. Repeat in one hour if necessary.	Powder No. 1.....	7·8	None.	Less	None.	47747	Curative powers claimed. Meets requirements of P. or P. Act.
	" No. 2.....	7·1	"	than 5 grains	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF KINGSTON—								
1911.								
Mar. 24	Headache Powders.	47748	A. P. Chown, Kingston.	3 pkg.	75	Vendor.....		Dr. Chown's Improved Headache Powders. A quick, safe and certain cure for headaches of all origins, whether bilious, nervous or hysterical. These powders are made from the purest ingredients and are guaranteed free from antipyrine, morphine, opium or chloral. Prepared by Dr. A.P.Chown, Kingston, Ont. Stamp on.
" 24	"	47749	W. W. Gibson, Kingston.	3 "	30	" .....		Perfect Headache Powders, No. 813 Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. W. W. Gibson Druggist, Kingston, Ont.
" 27	"	47750	J. S. McKeown, Belleville.	3 "	75	United Drug Co., Toronto		This sample is described like No. 46013.
" 27	"	47751	D. M. Waters, Belleville.	3 "	30	Vendor.. ..		A harmless, simple and almost instantaneous relief for all kinds of headache, prepared by Donald M. Waters, Pharmaceutical Chemist, Bellville, Ont.
" 28	"	47752	McDermid & Jury, Peterboro.	3 "	75	Hooper Co., Toronto.		On box. Hooper's Headache Powders No. 925 Proprietary or Patent Medicine Act. This remedy is carefully prepared from



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Ante-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrin, grains.		
Directions.—Place one powder on tongue and wash down with a little water. If not entirely relieved repeat in one hour. Not more than two powders should be taken in succession. Take as early in the attack as possible.	Powder No. 1 .....	6.1	1.5	.....	.....	47748	Curative powers claimed. Meets requirements of P. or P. Act.
	" No. 2 .....	6.7	1.9	.....	.....		
Directions.—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1 .....	10.2	2.1	None.	None.	47749	Curative powers claimed. Acetanilide in excess in one powder. Carelessly compounded; doubtful.
	" No. 2 .....	11.2	3.1	"	"		
.....	Powder No. 1 .....	5.1	None.	Less	None.	47750	Meets requirements of P. or P. Act.
	" No. 2 .....	5.7	"	than 5 grains	"		
Directions.—Place a powder on the tongue and swallow with a draught of water. If not relieved in half an hour follow by another powder, and then do not repeat for 4 hours.	.....	5.5	3.8	.....	.....	47751	One powder only furnished for analysis. Acetanilide in excess. Violates P. or P. Act.
	.....	.....	.....	.....	.....		
Directions on box.—Place one powder on the tongue and swallow with a little water. The dose for adults is one powder. This usually gives prompt relief, but the	Powder No. 1 .....	5.4	2.5	None.	None.	47752	The name and directions on the box do not agree with those on the powders. Conform to P. or P. Act, acetanilide declared.
	" No. 2 .....	5.9	2.7	"	"		

Continued.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF KINGSTON—								
1911.								
								the finest quality of acetanilid, citrate of caffen and rochelle salt, and is vastly superior to many. It is guaranteed not to contain any narcotic poisons, such as opium, morphin, belladonna, etc. Those afflicted with periodic headaches, neuralgia, etc., will find highly satisfactory results from its use.
Mar. 28	Headache Powders.	47753	Warne Drug Co., Peterboro'.	3 pkg.	30	Toronto Pharmacal Co., Toronto.		On powder, J. & P. headache powders. Jury and Gregory, Druggists, Oshawa, Collingwood, Bowmanville and Lindsay.
" 28	"	47754	Geo. Watson, Port Hope.	3 "	30	Vendor .....		This sample is described like No. 46018.
								Perfect Headache Powders, T. G. Watson, Port Hope. Prepared by Toronto Pharmacal Co., Ltd., 95 Proprietary or Patent Medicine Act. These Headache Powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits.
" 28	"	47755	H. W. Mitchell, Port Hope.	3 "	30	" .....		Perfect Headache Powders. W. H. Mitchell, Port Hope, Ont. These Headache Powders are an instantan-



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrin, grains.		
dose may be repeated in one hour if found necessary. More than two doses should never be taken in succession. In order to secure best results this remedy should be taken as early in the attack as possible.							
Directions on each powder.—Place the powder on the tongue and take a swallow of water. Take another powder in half an hour if necessary. Children should only take half a powder, or less according to age.							
.....	Powder No. 1. ....	10.1	2.2	None.	None.	47753	Curative powers claimed. Meets P. or P. Act.
	" " 2. ..	9.9	2.3	"	"		
Directions:—Take one powder dry on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	" " 1.....	9.5	1.9	"	"	47754	Curative properties claimed. Meets requirements of P. or P. Act.
	" " 2.....	10.2	2.0	"	"		
Directions:—Take one powder dry on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early	" " 1.....	7.7	1.5	"	"	47755	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	8.7	1.7	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF KINGSTON—

1911.								eous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. Stamp on.
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DISTRICT OF TORONTO—

Apr.	3	Headache Powders.	47252	D. H. MacLaren, Barrie.	3 pkg.	25	Vendor . . . . .	MacLaren's Perfect Headache Cure. A safe and instantaneous cure for headache and neuralgia. The Proprietary or Patent Medicine Act No. 1479. D. H. MacLaren, Chemist and Druggist, Barrie.
"	3	"	47253	W. J. MacFadden, Orillia.	3 "	25	The Toronto Pharmacal Co., Ltd., Toronto.	This sample is described like No. 46018.
"	3	"	47254	A. H. Fowlie, Midland.	3 "	45	Vendor . . . . .	Fowlie's Headache Powders. Simple and effective. This powder is not a cathartic. If the headache is caused by indigestion or derangement of the digestive organs, some gentle cathartic should be used. A.H.Fowlie, Phm. B., Chemist and Druggist, Midland, Ont. Stamp on.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenaectin, grains.	Phenazone = Anti-pyrin, grains.		

Concluded.

in the attack as possible. Do not repeat needlessly.							
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H. J. DAGER, INSPECTOR.

Directions:—Place the powder on the tongue and swallow with a draught of water. If not relieved in half an hour take another.	Powder No. 1.....	12.2	4.0	pre-	.....	47252	Curative powers claimed. Excess of acetanilide and phenacetin also present, without declaration. Violates P. or P. Act.
	" " 2.....	12.0	.....	sent.	.....		
.....	" " 1.....	10.4	2.1	none.	none.	47253	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	13.1	2.5	"	"		
Directions:—Place a powder on the tongue and swallow with a glass of water. May repeat in an hour if required.	" " 1.....	10.2	4.2	"	"	47254	Excess of acetanilide. Protected by stamp.
	" " 2.....	10.9	4.9	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF TORONTO—

1911.								
April	4	Headache Powders.	47255	Leader Pharmacy Co., Ltd., 65 King St., Toronto.	3 pkg.	30	Vendors .....	Perfect Headache Powders, Leader Pharmacy Co., Ltd., Toronto. 1236 Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick or nervous headache and neuralgia. They promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits.
"	7	"	47256	Howell & Co., 1674 Dundas St. West, Toronto.	3 "	25	Vendors .....	Headache Powders—A positive relief for headache and neuralgia, Howell & Co., Druggists, Toronto
"	11	"	47257	J. A. Woodhouse, 153 King St. West, Hamilton.	3 "	70	W. A. Howell, Hamilton.	Howell's sure cure for sick and nervous headache, neuralgia, &c., absolutely pure and harmless, never disappoints. Contains no antipyrin, opium, morphia or other poisons. A combination of 3. Stamp on.
"	11	"	47258	Parke & Parke, 16 Market Square, Hamilton.	3 "	75	Vendors]	Parke's Headache Powders—Relieves instantly and cures headache, neuralgia rheumatism, cold in the head, etc. They contain no morphine, chloral or other narcotics, "on powder." This powder contains caffeine and acetanilide. No. 84 Proprietary or Patent Medicine Act. Parke & Parke, Druggists, Hamilton.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Direction for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrin, grains.		

*Continued.*

Directions:—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	13·1	2·6	None.	None.	47255	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	10·3	2·1	"	"		
Directions.—Place a powder on the tongue and take a swallow of water, if necessary repeat the dose in 20 minutes.	Powder No. 1.....	9·9	4·5	"	"	47256	Excess of acetanilide, without declaration. Violates P. or P. Act.
	" " 2.....	11·8	5·4	"	"		
Directions.—One powder on the tongue, swallow with a draught of water. Repeat in 60 minutes if required; children one half.	Powder No. 1.....	8·9	4·4	None.	None.	47257	Curative power claimed. Excess acetanilide but protected by stamp.
	" " 2.....	8·3	4·1	"	"		
Directions for adults.—Place one powder on the tongue and swallow with a draught of water. If not relieved, repeat in half an hour, and not again for four hours.	Powder No. 1.....	6·8	5·1	None.	None.	47258	Curative power claimed. Acetanilide declared.
	" " 2.....	7·5	5·4	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF TORONTO—

1911.								
April 11	Headache Powders.	47259	Hennessey Drug Store, Ltd., 7 King St., Hamilton.	3 pkg.	75	Vendors.....		Sutherland's Headache Powders.— Safe and effective. Cure any headache. Relieve neuralgia at once. No. 1071 The Proprietary or Patent Medicine Act. Prepared by Jno. P. Hennessey, Chemist, Hamilton
" 11	"	47260	Hawkins, Ltd., Market Square, Hamilton.	3 "	75	"		Spackman's Neuralgia Powders.— A quick and certain relief for nervous and sick headache and neuralgia. Contains acetanilide. Prepared by Hawkins, Ltd., Hamilton.
" 11	"	47261	W. B. Smith, 245 King St., East, Hamilton	3 "	45	Vendor.....		Smith's Headache Powders.—W. B. Smith, Druggist, Hamilton.

DISTRICT OF LONDON—

April 25	Headache Powders	48002	Alex. Stewart, Guelph.	3 pkg.	30	Vendor.....		Soothal.—A new discovery for the cure of headache and neuralgia. The only known remedy known for these complaints free from ingredients that cause heart depression. Instant relief easy to take. Soothing to the nerves. Each powder contains one grain of caffeine alkaloid and four grains of pure phenylacetamide. Prepared by Alex. Stewart Mfg., Chemist, Guelph, Ont.
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## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, gran.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrene, grains.		
Directions.—Plach powder on the tongue and swallow with a draught of water. If not relieved in half an hour take another powder. Do not take a third for two hours.	Powder No. 1.....	10·8	1·8	None.	None.	47259	Curative power claimed. Meets requirements of P. or P. Act.
	" " 2.....	9·3	1·6	"	"		
Directions.—One powder dry on the tongue. Repeat in an hour if needed, then once in 3 or 4 hours for chronic neuralgia.	Powder No. 1.....	8·2	5·5	None.	None.	47260	Acetanilid declared. Is present in more than 5 grains.
	" " 2.....	8·0	5·2	"	"		
Directions.—Take one powder on the tongue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	10·4	6·6	None.	None.	47261	Acetanilide present in dangerous amount without declaration. Violates P. or P. Act.
	" " 2.....	9·1	5·9	"	"		

JNO. TALBOT, ACTING INSPECTOR.

Directions.—Take a powder dry on the tongue and swallow with a draught of water. Repeat in 3 hours if required and again in 4 hours if not relieved.	Powder No. 1.....	9·1	4·5	None.	None.	48002	Curative power claimed. Acetanilide disguised as phenylacetamide in declaration, and is present in excess of amount claimed.
	" " 2.....	1·8	4·8	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF LONDON

1911.								
April 25	Headache Wafers	48004	J. B. Broadfoot, Guelph.	3 pkgs	75	Toronto Pharmacal, Toronto.	.....	Perfect Headache Wafers. Are absolutely free from harmful Drugs, such as Morphia, Chloral, Bromides and similar nerve sedatives. No. 95 the Proprietary or Patent Medicine Act. Toronto Pharmacal Co., Ltd., Toronto, Montreal, Winnipeg.
" 26	Headache Powders	48012	J. H. Schmidt, Berlin.	"	"	Druggists Corporation of Canada, Toronto.	.....	D. C. Headache Powders. A simple safe and effectual remedy for all headaches, easy to take, quick to cure will be found the most effective treatment for the immediate relief of sick headache, nervous headache, neuralgic headache, grippe headache, catarrhal headache, travellers headache. Headache of mental and physical exhaustion or headache from any cause whatever. Do not contain morphine, opium, chloral, cocaine or any of these dangerous drugs, are invaluable for women who suffer each month. They give prompt relief without depressing the heart or upsetting the stomach. Clear the head, brighten the brain, tone up the nerves, and put a man or woman in shape for a days work. No. 642. The Proprietary Patent Medicine Act con-



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrin, grains.		

—Continued.

Directions :—Place the wafer for a few moments in a glass of water until thoroughly soft then swallow. Another may be taken in an hour if the first has not given sufficient relief, a seedlitz powder frequently gives valuable assistance.	Powder No. 1.....	12.2	2.5	None.	None.	48004	Acetanilide in slight excess.
	" No. 2.....	12.2	2.5	"	"		
Directions :—Place the powder on the tongue Swallow with a draught of water. If not relieved in half an hour take another powder. Do not repeat again for four hours.	" No. 1.....	9.3	4.0	None.	None.	48012	Curative powers claimed. Acetanilide declared as Phenylacetamide and present in 4 grain dose. Meets technical requirements of P. a. P. Act.
	" No. 2.....	9.2	4.0	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF LONDON—								
1911.								
Apr. 26	Headache Powders.	48013	Clarks Bros, Berlin.	3 pgs.	75	Vendor.....		tains Phenyl-acetamide and other effective pain relieving remedies. Clark'e Headache Cure. contains acetamid. No. 913 The Proprietary or Patent Medicine Act, Mfg. and sold only at Clarke's Drug Store, Berlin, Ont.
" 26	"	48015	A. J. Roos, Berlin	"	"	Vendor.. ....		Roos' Headache Powders. No. 513. The Proprietary or Patent Medicine Act. Roos' Pharmacy, Berlin, A.J. Roos Proprietor.
" 26	"	48023	A. M. Edwards, Galt.	"	30	" .....		Edwards. Fifteen minutes headache and neuralgia cure, will cure a nervous headache in a few minutes, and will give quick relief in pains of all kinds, particularly those of La grippe, neuralgia, rheumatism, and the periodic pains of woman. The actions of the powders may be much helped by taking with them a little hot tea or spirits and and lying down a short time. Sold only by A. M. Edwards, Galt, Stamp on.
" 26	"	48024	W. M. Kirkland, Galt.	"	30	Toronto Pharmacal Co., Toronto.		This sample is described like No. 46018.
" 25	"	48396	A. B. Petrie, Guelph.	"	30	Chemists' Co. of Canada, Hamilton.		This sample is described like No. 43210.
" 25	"	48399	W. N. Beattie, Guelph.	3 "	75	Vendor.....		Beattie's Headache and Neuralgia Powders No. 1899. The Proprietary and Patent Medicine Act. Prepared by W. H. Beattie, Chemist and Druggist, Guelph, Ont.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrene, grains.		
Directions :—One powder with a little water if not relieved in $\frac{1}{2}$ an hour take another powder.	Powder No. 1.....	13·9	6·2	None.	None	48013	Curative powers claimed. Contains excess of acetanilide, but presence is declared.
	" No. 2.....	12·4	5·8	"	"		
Directions :—Take a powder dry on the tongue, followed by a little water, repeat in an hour if not relieved.	" No. 1.....	7·3	None.	Less than 5 grs.	None.	48015	Meets requirements of P. or P. Act.
	" No. 2.....	6·3	"	"	"		
Directions :—For headache and neuralgia take a powder every hour until relieved. For La grippe, rheumatism or female pains, one every three hours.	" No. 1.....	18·5	5·1	.....	.....	48023	Curative powers claimed. Contains excess of acetanilide without declaration, but has stamp on.
	" No. 2.....	19·0	5 5	.....	.....		
.....	Powder No. 1. ....	9·6	2·0	none.	none.	48024	Curative powers claimed. Meets P. or P. Act.
	" " 2. ....	11·3	3·3	"	"		
.....	" " 1. ....	17·8	5·5	"	"	48396	Curative powers claimed. Meets requirements of P. or P. Act. Acetanilide declared.
	" " 2. ....	18·5	5·5	"	"		
Directions.—Place a powder on the tongue and swallow with a drink of water. If not relieved in half an hour another powder may be taken.	" " 1.....	3·7	none.	Less than 5 grains	.....	48399	Phenacetin—meets requirements of P. or P. Act.
	" " 2. ....	5·9	"	"	.....		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF WINDSOR—								
1911.								
Apr. 19	Headache Powders.	48358	W. T. Rapley, 3 pgs. Strathroy.	3	75	C. H. Gunn & Co., Chatham	.....	This sample is described like No. 43202.
" 20	" ..	48363	H. E. Perrott, 3 " Brantford.	3	30	Vendor.....	.....	Perrott's Headache Powders, simple and effective. No. 971 The Proprietary and Patent Medicine Act. H. E. Perrott, Chemist, Brantford, Ont.
" 20	Headache Capsules..	48366	S. Tapscott & Co., Brantford	3	30	Vendors .....	.....	Tapscott's Headache Capsules, a harmless and certain cure for all headaches, neuralgia, etc. These capsules contain no morphine, opium or other narcotics. No. 496 The Proprietary or Patent Medicine Act. S. Tapscott & Co., Chemists and Druggists, Brantford.
" 20	Headache Powders.	48368	M. H. Robertson, Brantford	3	75	Vendor .....	.....	Robertson's Headache Powders No. 1012. The Proprietary or Patent Medicine Act. M. H. Robertson, Prescription Druggist, Brantford, Ont.
" 20	" ..	48371	A. W. Smiley, 3 " Brantford.	3	75	" ..	.....	Headache Powders for headache, neuralgia, &c. Formula phenacetine 5 grains; caffeine citrate, 1 grain soda bicarbonate, 1 grain. A. W. Smiley, Druggist, Brantford.
" 21	Headache Powders	48375	F. G. Walley, 3 pkg. Ingersoll.	3	75	.....	Drug Trading Co., Toronto.	Dr. Low's Headache Powders. A quick and reliable specific for headache and neuralgia, etc. No. 71 The Proprietary or Patent Medicine Act. The T. Milburn Co., Ltd., Toronto., 5 866 grs acetanilide.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrin, grains.		
.....	Powder No. 1.....	5.7	5.4	none.	none.	48358	Curative powers claimed. Acetanilide in excess without declaration. Violates P. or P. Act.
	" " 2.....	5.1	4.8	"	"		
Directions.—Place a powder on the tongue and swallow with a draught of water. If not relieved in an hour another powder may be taken.	.....	5.6	1.7	"	"	48363	Meets requirements of P. or P. Act.
Directions.—One capsule swallowed with a draught of water. If not relieved another may be taken in half an hour.	Powder No. 1.....	4.6	2.1	"	"	48366	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	4.7	2.1	"	"		
Directions.—Place dry on the tongue and swallow with a draught of water. Repeat in two hours if necessary.	" " 1....	4.8	none.	Less than 5 grains	....	48368	Meets requirements of P. or P. Act.
	" " 2.....	3.8	"	"	.....		
Directions.—One powder repeated in $\frac{1}{2}$ an hour if necessary.	" " 1.....	5.9	"	"	.....	48371	" "
	" " 2.....	6.4	"	"	.....		
Directions.—For adults place a powder on the tongue and take a swallow of water; children under 10 years $\frac{1}{3}$ of a powder; 10 to 15 years $\frac{1}{2}$ a powder, if necessary repeat the dose in 30 minutes.	Powder No. 1.....	14.3	6.1	None.	None.	48375	Acetanilide in dangerous amount; presence declared.
	" No. 2.....	16.2	6.8	"	"		

JNO. TALBOT, INSPECTOR.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF WINDSOR—

1911.								
April 21	Headache Powders.	48376	R. N. Thurtell, Ingersoll.	3 "	75	Vendor . . . . .		Thurtells Headache Powders. Cure nervous and sick headaches, neuralgia, toothache and pain generally. Prepared by R. N. Thurtell, Ingersoll, Ont.
" 21	" ..	48378	Jno. E. Gayfer, Ingersoll.	3 "	30	.....	United Drug Co., Toronto.	This sample is described like No. 46013.
" 21	Headache Wafers	48381	G. A. Ionson, Ingersoll.	3 "	75	.....	F. Stearns, Windsor, Ont.	This sample is described like No. 42284.
" 21	" ..	48384	F. G. Walley, Ingersoll.	3 "	75	.....	" ..	This sample is described like No. 43203.

DISTRICT OF MANITOBA—

1911.								
April 19	Headache Powders	43573	WheatCityPharmacy, Brandon	3 pkg.	75	United Drug Co., Ltd., Toronto.	.....	This sample is described like No. 46013.
" 19	Headache Wafers.	43574	" ..	3 "	75	The Zymole Co., New York.	.....	This sample is described like No. 42284.
" 19	Headache Powders	43575	McCulloch Drug Store, Brandon	3 "	75	Vendor . . . . .	.....	Two-Minute Headache Powders. These headache powders are an instantaneous cure for sick or nervous headacheand neuralgia. They promptly relieve sick stomach,exhausted nerves, mental strain, sleeplessness, worry and anxiety, and all forms of depression of spirits. Caffeine, soda bicarb, acetanilid 4 grs. in each powder. McCulloch's Drug Store, Brandon.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinions of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti- pyrin, grains.		

Continued.

Directions.—Place one powder on the tongue and swallow with a draught of water. Repeat in half an hour if necessary.	Powder No. 1.....	7.9	3.7	None.	None.	48376	Curative powers claim- ed. Acetanilide in excess. Stamped.
	" No. 2.....	9.3	4.1	"	"		
.....	Powder No. 1.....	5.3	None	Less	.....	48378	Meets requirements of P. or P. Act.
.....	" No. 2.....	5.5	"	than 5 grains	.....		
.....	Powder No. 1.....	7.7	3.6	None.	None.	48381	Curative powers claim- ed. Acetanilide slightly above amount declared on label.
.....	" No. 2.....	8.1	3.6	"	"		
.....	Powder No. 1.....	8.0	3.6	None.	None.	48384	Curative powers claim- ed. Meets require- ments of P. or P. Act. Acetanilide de- clared.
.....	" No. 2.....	8.5	3.8	"	"		

A. C. LARIVIERE, INSPECTOR.

.....	Powder No. 1.....	10.2	None.	Less	.....	43573	Meets requirements o P. or P. Act.
.....	" No. 2.....	7.2	"	than 5 grains	.....		
.....	Powder No. 1.....	8.8	3.8	None.	None.	43574	Curative powers claim ed. Acetanilide in distinct excess of amount claimed on label.
.....	" No. 2.....	10.1	4.3	"	"		
Directions.—Take one powder dry on the ton- gue or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	8.0	1.6	None.	None	43575	Curative powers claim ed. Meets require ments of P. or P. Act. Acetanilide de- clared.
	" No. 2.....	11.3	2.3	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer of Furnisher, as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1911.								
April 19	Headache Wafers.	43576	McCulloch Drug Store, Brandon	3 pkg.	75	Vendor.....		Two-Minute Head-ache Wafers. A safe and positive relief for all forms of nervous head-ache or neuralgia. These wafers will be found a specific in the treatment of sick or nervous headache, neuralgia rheumatic or men- strual pains. They are of especial value in the relief of sleep- lessness, absolutely free from harmful drug, such as mor- phia, chloral, bro- mides or similar nerve sedatines, caffeine, soda bi- carb, acetanilid 4½ grains in each wafer, McCulloch's Drug Store, Bran- don.
" 21	" ..	43577	Colcleugh & Co., Winnipeg.	3 "	75	Nat. Drug & Chem. Co. of Canada, Ltd.		"Flash Light" Head-ache Wafers. Safe and almost instan- taneous cure for headache and neu- ralgia, odorless and almost tasteless, Nat. Drug & Chem- Co. of Canada, Ltd. These wafers con- tain antifebrin and caffeine.
" 21	Headache Powders	43578	Lyons Drug Store Winnipeg.	3 "	75	Colcleugh & Co., Winni- peg.		Colcleugh's Head- ache Powders. Simple and effec- tive, Colcleugh & Co., Winnipeg, Man. *817.
" 21	Headache Wafers.	43579	Colcleugh & Co., Winnipeg.	3 "	75	Duncan Medi- cine Co.		Dr. Duncan's Instant Cure for headache. A speedy certain and safe cure for hendaches of all origins, whether sick bilious, ner- vous or hysterical, also a positive relief



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti- yprin, grains.		

Concluded.

Directions:—Place the wafer for a few moments in a glass of water until thoroughly softened, then swallow. Another may be taken in an hour if necessary.	Powder No. 1.....	9·1	4·1	None.	None.	43576	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2.....	9·4	4·1	"	"		
Directions:—Soak the wafer in water until soft (about one minute is sufficient) then place in the mouth and swallow with a draught of water. If not relieved in half to one hour, another wafer may be taken.	Powder No. 1.....	5·1	4·0	None.	None.	43577	Curative powers claimed. acetanilide declared. Meets requirements of Act.
	" " 2.....	5·5	4·0	"	"		
Directions:—Place a powder on the tongue and swallow with a draught of water. If not relieved in one hour another powder may be taken.	Powder No. 1.....	7·1	None.	less than 5 grs.	.....	43578	Meets requirements of P. or P. Act.
	" " 2.....	7·0	"	"	.....		
Directions:—Place the wafer in a glass of water until thoroughly softened, (about ½ to 1 minute) and place it in the mouth while soft swallow with a drink of water. If relief is not obtained repeat in an	Powder No. 1.....	7·8	None.	less than 5 grs.	...	43579	Curative powers claimed. Meets requirements of Act.
	" " 2.....	8·4	"	.....	.....		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1911.								
April 21	Headache Powders	43580	Colcleugh & Co., Winnipeg.	3 pkg.	75	Vendors. . . . .		in neuralgia. These wafers contain caffeine, bromide of soda and phenacetine and are warranted free from antipyrin morphine, chloral, or opium, Duncan Medicine Co. This sample is described like No. 43578.
" 21	Headache Wafers.	43581	W. W. McKeague, Winnipeg.	3 " .	75	Nat. Drug & Chem. Co. of Canada, Ltd.		This sample is described like No. 43577.
" 21	Headache Powders	43582	" .	3 " .	75	Vendor. . . . .		Headache Powders. W. W. McKeague, Dispensing Chemist, Winnipeg. Stamp on.

DISTRICT OF CALGARY—

May 4	Headache Powders	43802	T. G. Carson, Edmonton.	3 pkgs	75	Toronto Pharmacal Co., Toronto.		Perfect Headache Powders. Prepared expressly for T. G. Carson, Druggist, by Toronto Pharmacal Co., Toronto, Ltd., 95 Proprietary or Patent Medicine Act. These headache powders are an instantaneous cure for sick or nervous headache and neuralgia; they promptly relieve sick stomach, exhausted nerves, mental strain, sleeplessness, worry and anxiety and all forms of depression of spirits.
" 4	"	43803	A. Archibald, Edmonton..	3 " .	75	United Drug Co., Ltd., Toronto.		This sample is described like No 46013.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder grains.	Acetanilide Anti-febrin, grains.	Phenacetin, grains.	Phenazone Anti-pyrine, grains.		
<i>Concluded.</i>							
hour but it is not advisable to take more than two wafers in succession. The wafers should be taken as early in the attack as possible.							
.....	Powder No. 1.....	7.6	None.	less	.....	43580	Meets requirements of P. or P. Act.
	" " 2.....			than			
		8.5	"	5 grs.			
.....	Powder No. 1.....	5.1	3.8	None.	None.	43581	Curative powers claimed. Meets requirements of P. or P. Act. acetanilide declared.
	" " 2.....	6.6	4.7	"	"		
No directions on the label.	Powder No. 1.....	9.1	5.9	None	None.	43582	Great excess of acetanilide without declaration. Protected by stamp.
	" " 2.....	9.7	6.4	"	"		

## R. W. FLETCHER—INSPECTOR.

Directions:—Take one powder dry on the tongue, or in a little water, and repeat in half an hour if not relieved. Take as early in the attack as possible. Do not repeat needlessly.	Powder No. 1.....	8.2	1.7	none.	none.	43802	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	8.3	1.8	"	"		
..... Powder No. 1.....		5.7	none.	Less	.....	43803	Meets requirements of P. or P. Act.
" " 2.....				than 5			
		5.5	"	grains			



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911. May	4 Headache Wafers.	43804	G. H. Graydon, Edmonton.	3 "	75	Martin, Bole & Wynne, Montreal.	.....	Instant Headache Cure. Each wafer contains 7 grains of acetanilide combined with caffeine, and is warranted free from injurious drugs. G.H.Graydon, Edmonton, Alta.
"	4 Headache Wafers.	43805	D. W. MacDonald, Edmonton	3 pkg	75	Wampole & Co., Perth, Ont.	.....	McDonald's Headache Wafers. A positive relief for all forms of nervous headache or neuralgia. In the treatment of sick or nervous headache, neuralgia, rheumatism or menstrual pains, these wafers will be found a most appropriate remedy. For the relief of sleeplessness they are especially valuable. Each wafer contains acetanilide (4½ grs.) in combination with caffeine sodium bicarbonate and aromatics.
"	4 Headache Powders	43806	Edmonton Drug Co., Edmonton	3 "	75	Nat. Drug & Chem. Co., Ltd., Montreal.	.....	This sample is described like No. 42276.
"	"	43807	C. A. Wallace, Calgary.	3 "	75	The Toronto Pharmacal Co., Toronto	.....	This sample is described like No. 46018.



## SESSIONAL PAPER No. 14

## HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Antipyrin, grains.		

*Continued.*

Directions:—Place the wafer in a glass of water until thoroughly softened (about one half to one minute) and place it in the mouth while soft, swallow with a drink of water. If relief is not obtained, repeat in an hour, but it is not advisable to take more than two wafers in succession. The wafers should be taken as early in the attack as possible. If any depression is felt, it may be dispelled by taking two teaspoonfuls of whiskey or a glass of wine.	Powder No. 1.....	8.2	5.8	none.	none.	43804	Curative powers claimed. Acetanilide declared; and in large amount. Meets requirements of P. or P. Act.
	" " 2.....	9.8	6.8	"	"		
Directions:—For headache one wafer which may be repeated in thirty minutes if necessary. Dip the wafer in water until thoroughly soft, then place on the tongue and swallow with a little water. At least three hours should elapse before another dose is taken. A seidlitz powder or other mild laxative should be taken with the first dose. Never put wafer into mouth dry.	Powder No. 1.....	11.0	4.1	none.	none.	43805	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2.....	11.2	4.2	"	"		
.....	Powder No. 1.....	7.1	none.	"	"	43806	Apparently contains aspirin. Meets requirements of P. or P. Act.
	" " 2.....	7.3	"	"	"		
.....	Powder No. 1.....	9.0	1.8	"	"	43807	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2.....	9.9	2.0	"	"		



Date of Collection	Name of Sample	No. of Sample	Name and Address of Vendor	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911.								
May	9 Headache Wafers.	43808	Wendell Maclean, Calgary.	3 "	75	Nat. Drug & Chem. Co., Ltd., Montreal.	.....	National Headache Wafers. These wafers contain caffeine and acetanilide and are warranted free from antipyrine, morphine, chloral or opium. No. 1042 Proprietary or Patent Medicine Act. The Nat. Drug & Chem. Co., of Canada, Ltd.
	Headache Wafers	43809	MacFarlane & White, Calgary	3 pkg.	75	The Zymole Co., New York.	.....	This Sample is described like No. 42284.
		43810	Oliver Bros, Calgary	"	"	Toronto Pharmacal Co., Toronto.	.....	Dr. Hill's Headache Cure. These wafers contain nothing injurious and are guaranteed free from antipyrin, morphine, chloral or opium, 668. The Proprietary or Patent Medicine Act, mfy. by Oliver Bros. Druggists, Calgary-Alta.
		43811	Nat. Drug of Chem. Co. Calgary	"	"	Nat. Drug & Chem. Co., Toronto.	.....	This Sample is described like No. 42276.

DISTRICT OF NELSON—

May	3 Headache Wafers	48419	Poole Drug Co., Nelson.	3 pkgs	75	Stearns & Co., Windsor, Ont.	.....	This Sample is described like No. 42284.
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SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions as found found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weights of Con- tents of one pow- der, grains.	Acetanilide- Anti-febrin, grains.	Phenacetin, grains.	Phenazone= Anti- pyrin, grains.		

Concluded.

Directions:—Place the wafer in a glass of water until thoroughly softened, then swallow with a little water. Another may be taken in an hour if the first has not given sufficient relief.	Powder No. 1. ....	15.5	5.9	"	"	43808	Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2. ....	15.5	6.0	"	"		
.....	Powder No. 1. ....	8.9	5.8	None.	None.	43809	Curative powers claimed. Acetanilide declared, meets P. or P. Act.
	" " 2. ....	8.3	3.6	"	"		
Directions:—Place the wafer in a glass of water until thoroughly softened and place in the mouth while soft swallow with a drink of water, repeat in an hour if necessary, then every 2 or 3 hours.	Powder No. 1. ....	12.6	2.3	None.	None.	43810	Curative powers claimed. Meets requirements of P. or P. Act.
	" " 2. ....	11.5	2.2	"	"		
.....	Powder No. 1. ....	8.0	None.	None.	None.	43811	Apparently contains aspirin. Meets requirements of P or P. Act.
	" " 2. ....	6.7	"	"	"		

THOS. PARKER—INSPECTOR.

.....	Powder No. 1. ....	8.9	4.1	None.	None.	48419	Curative powers claimed. Acetanilide declared. Meets P. or P. Act.
.....	" " 2. ....	9.4	4.0	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

April 21	Headache Powders	38135	Burns & Cairns, Vancouver.	3 pks	75	Orangeine Chem. Works Windsor, O.	.....	Orangeine the magic pain allayer promptly relieves, soothes, strengthens, rebuilds and permanently benefits. Chemically pure acetanilid 2.4 grs. Soda Bicarb, Caffeine and Homeopathic, trituration of mandrake. Blue flag, and nux vomica 2.6 grs. Total 5 grs. Reg. No. 37. The Proprietary or Patent Medicine Act, relieves all kinds of pain no difference where located or from what cause. Prepared by The Orangeine Chemical Work, Windsor, Ont., P. A. Ackman, Proprietor.
" 21	Headache Wafers.	38136	Campbell Burns Drug Co., Vancouver.	3 pkg.	75	Nat. Drug Co.	.....	This sample is described like No. 42276.
" 21	"	38137	Owl Drug Store, Vancouver.	3 "	75	The Zynole Co., New York.	.....	This sample is described like No. 42284.
" 21	"	38138	Vancouver Drug Co., Vancouver	3 "	75	Manchester Drug Co., Toronto.	.....	Reid's Headache Wafers. A safe and positive relief for all forms of nervous headache or neuralgia. These wafers will be found a specific in the treatment of sick or nervous headache, neuralgia, rheumatism or menstrual pains. They are of especial value in the relief of sleeplessness, are absolutely free from harmful drugs, such as morphine, chloral,



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti- pyrin, grains.		

J. F. POWER—INSPECTOR.

Directions:—For Asthma Colic, Cholera Morbus and painful menstruation take an orangeine powder dissolved in a teacup half full of hot water, and repeat in a quarter or half hour, if necessary after, which a powder dry upon the tongue, or dissolved in hot or cold water, every four or five hours will suffice. For headache, neuralgia, rheumatism, gout. False pains, after pains and sciatica. Take an Orangeine Powder either dry upon the tongue, with a swallow of water or dissolved in hot or cold water, and repeat in a quarter or half hour if necessary, after which a dose every four or five hours will be sufficient.	The following (No. 1 is printed on ( " 2 a circular enclosed in the box. Orangeine is an infallible cure for a great variety of painful and serious ailments and that one or two powders bring immediate relief without the slightest results of reaction or any other bad effect so often experienced from drugs and doses.	5·1 5·1	2·5 2·5	None. "	None. "	38135	Excessive claims made as a cure. Meets requirements of P. or P. Act, acetanilide declared.
.....	Powder No. 1.....	5·1	none.	none.	none.	38136	Contains aspirin. Meets requirements of P. or P. Act.
.....	" " 2.....	5·0	"	"	"	38137	Curative powers claimed. Meets requirements of P. or P. Act. Acetanilide declared.
.....	" " 1.....	8·2	3·8	"	"	38138	Meets requirements of P. or P. Act.
.....	" " 2.....	6·9	3·2	"	"		
Directions.—Place the wafer for a few moments in a glass of water until thoroughly softened, then swallow. Another may be taken in an hour if necessary.	" " 1.....	9·6	1·9	"	"		
	" " 2.....	11·3	2·1	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1911.								
April 21	Headache Powders.	38139	Georgia Pharmacy, Vancouver.	3 pkg.	75	L. G. Henderson, Vancouver.		bromides and similar nerve sedatives. 1560 Proprietary or Patent Medicine Act. Manchester Drug Co., Toronto. Gilmour's Headache and Neuralgia Powders. No opiates or harmful drugs in these powders. Leslie G. Henderson, Vancouver, B.C. No. 809.
" 21	"	38140	Red Raven Drug Store, Vancouver.	3 " "	75	McDowell, Atkins & Watson, Vancouver.		Flint's Neuralgia and Headache Powders, a prompt and harmless cure for all forms of nervous neuralgia or sick headache. These powders contain no opiates or anything in the least injurious. No. 816 The Proprietary or Patent Medicine Act. The McDowell, Atkins, Watson Co., Ltd., Vancouver, B.C.
" 21	"	38141	Harrison's Drug Store, Vancouver.	3 " "	75	T. Milburn Co., Toronto.		This sample is described like No. 42281. Stamp on.
" 21	"	38142	Law's Drug Store, Vancouver.	3 " "	75	Baiss Bros. & Stevenson, Ltd., London, Eng.		Headache Powders affords relief in a few minutes. Baiss Bros. & Stevenson, Ltd., Manufacturing Chemists, London, Eng. Stamp on.
" 21	Headache Tablets.	38143	Harrisons Drug Store, Vancouver.	3 pkg.	75	Dr. Shoop, Racine, U.S.A.		Dr. Shoop 20 Minute Headache Tablets. Certain relief for neuralgia or headache in 20 minutes. Dr. Shoop, Racine U.S., Stamp on.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrin, grains.		

Continued.

Directions.—Place dry upon the tongue and wash down with a small draught of water. A second powder may be taken in half an hour if necessary.	Powder No. 1.....	10.6	none.	Less than 5 grains	.....	38139	Meets requirements of P. or P. Act.
	" " 2.....	9.2	"	"	.....		
Directions.—One to be placed dry upon the tongue and washed down with a small draught of water. May be repeated in an hour if required.	" " 1.....	6.2	3.5	none.	none.	38140	Curative powers claimed. Acetanilide in excess. Violates terms of P. or P. Act.
	" " 2.....	6.1	3.3	"	"		
.....	" " 1.....	14.4	6.1	"	"	38141	Curative properties claimed. Acetanilide declared. Meets requirements of P. or P. Act.
	" " 2.....	14.3	6.1	"	"		
Directions.—Place the wafer for a few moments in a glass of water until thoroughly softened, then swallow. Another may be taken in an hour if the first has not given sufficient relief. A seidlitz powder frequently gives valuable assistance.	" " 1.....	10.0	2.4	.....	.....	38142	Meets requirements of P. or P. Act, and bears stamp.
	" " 2.....	8.9	2.5	.....	.....		
Directions.—Dissolve one tablet slowly upon the tongue. If not entirely relieved within twenty minutes repeat the dose. Two doses will be sufficient in all cases.	Powder No. 1.....	21.0	None.	Less than 5 grains	.....	38143	Phenacetin. Meets requirements of P. or P. Act.
	" No. 2.....	21.0	"	"	.....		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1911.								
May 21	Headache Wafers.	38144	Central Drug Store (C. D. Gillanders) Vancouver.	3 pkg.	75	Warnpole & Co., Perth, Ont.	.....	Headache Wafers. A positive relief for all forms and nervous headache or neuralgia. In the treatment of sick or nervous headache. Neuralgia, rheumatism or menstrual pains, these wafers will be found a most appropriate remedy. For the relief of sleeplessness they are especially valuable. Composition: acetanilide 4½ grs. in each wafer, caffeine and sodium bicarbonate and aromatics. C. D. Gillanders, Vancouver, B.C.

DISTRICT OF VICTORIA—

May 12	Headache Wafers.	47585	Wm. Jackson & Co., Victoria, B.C.	3 pkg.	75	The Zymole, Co., New York.	.....	This sample is described like No. 42284.
" 12	"	47586	"	3 "	75	Nat. Drug & Chem. Co., Hamilton, Ont.	.....	Imperial Headache Wafers No. 585. The Proprietary or Patent Medicine Act. These wafers contain acetanilide and caffeine. Sold by Wm. Jackson & Co., Druggists, Victoria, B.C.
" 12	Headache Powders	47587	Hall & Co., Victoria, B.C.	3 "	75	Canadian Pharmacal Ass'n., Toronto.	.....	Standard Headache Powders. A simple harmless and almost instantaneous relief for headache from any Cause. No. 90. The Proprietary or Patent Medicine Act. These powders contain acetanilide combined with caffeine. Prepared by the Canadian Pharmacal Ass'n., Toronto.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weight of Con- tents of one pow- der, grains.	Acetanilide= Anti-febrin, grains.	Phenacetin, grains.	Phenazone= Anti- yprin, grains.		

Concluded.

Directions.—For head-ache one wafer which may be repeated in thirty minutes if neces- sary. Dip the wafer in water until thoroughly soft, then place on the tongue and swallow with a little water. At least three hours should elapse before another dose is taken. A Seid- litz powder or other mild laxative should be taken with the first dose. Never put wafer into the mouth dry.	Powder No. 1.....	10·4	3·8	None.	None.	38144	Acetanilide declared. Meets requirements of P. or P. Act.
	" No. 2.....	12·9	4·8	"	"		

D. O'SULLIVAN—INSPECTOR.

.....	Powder No. 1.....	7·6	3·5	None.	None.	47585	Cnrrative powers claim- ed. Meets require- ments of P. or P. Act. Acetanilide de- clared.
	" No. 2.....	7·9	3·6	"	"		
Directions.—Soak the wafer in water until it becomes soft, then place in the mouth and swal- low with a drink of water. Repeat the dose in half an hour if ne- cessary.	Powder No. 1.....	5·8	4·3	None	None.	47586	Acetanilide declared. Meets requirements of P. or P. Act.
	" No. 2.....	7·0	5·7	"	"		
Directions.—Place a pow- der on the tongue and swallow with a draught of water. If not relie- in half an hour take another powder. Do not repeat again for four hours.	Powder No. 1.....	5·4	2·1	None.	None.	47587	Acetanilide declared Meets requirements of Act.
	" No. 2.....	5·4	2·1	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF VICTORIA—								
1911.								
May 12	Headache Wafers.	47588	Hall & Co., Victoria, B.C.	3 pkgs.	75	The Chemists Co., Ltd., Hamilton.	.....	This sample is described like No. 43210.
" 12	Headache Powders	47589	Geo. A. Fraser, Victoria, B.C.	3	75	The Hoffman Drug Co., Bridgeburg, Ont.	.....	This sample is described like No. 36392.
" 12	Headache Wafers.	47590	G. A. Fraser, Victoria, B.C.	3 pkg.	75	Gibson, Howell & Co., Philadelphia, Pa.	.....	Gibson's Headache Wafers. A positive relief for all forms of nervous headache or neuralgia. In the treatment of sick or nervous headache, neuralgia rheumatism or menstrual pains. These wafers be found a most appropriate remedy. For the relief of sleeplessness they are especially valuable composition; acetanilide 4½ grs. in each powder caffeine, sodium, bicarbonate and aromatic powder. They are guaranteed to be absolutely free from morphine, opium or cocaine. Gibson, Howell & Co., Mfg. Chemists, Philadelphia, Pa., U.S.A.
" 12	"	47591	D. E. Campbell, Victoria, B.C.	3	75	Vendor...	.....	Campbell's Headache Wafers. An immediate cure for headache and neuralgia. A speedy certain and safe cure for headaches of all origins, whether sick, bilious, nervous or hysterical, also a positive relief in neuralgia. D. E. Campbell, Family Chemist,



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analyst.
		Weights of Contents of one powder, grains.	Acetanilide Anti-febrin, grains.	Phenacetin, grains.	Phenazone Anti-pyrim, grains.		

Continued.

	Powder No. 1.....	4.7	2.2	None.	None.	47588	Curative powers claimed. Meets requirements of P. or P. Act. Acetanilide declared.
	" No. 2.....	4.9	2.3	"	"		
	Powder No. 1.....	12.1	5.0	None.	None.	47589	Curative powers claimed. Acetanilide declared.
	" No. 2.....	10.9	4.4	"	"		
Directions:—For Headache, one wafer which may be repeated in thirty minutes if necessary. Dip the wafer in water until thoroughly soft, then place on the tongue and swallow with a little water, at least three hours should elapse before another dose is taken. A seidlitz powder or other mild laxative should be taken with the first dose. Never put wafer into the mouth dry.	No. 1.....	15.1	5.6	None.	None.	47590	Acetanilide declared, but present in excess of amount named. Meets requirements of P. or P. Act.
	" 2.....	15.1	5.6	"	"		
Directions:—Soften the wafer by placing it for a moment in a little water, then swallow with a drink of water. If relief is not obtained, a second wafer may be taken half an hour or an hour later.	No. 1.....	10.1	1.8	None.	None.	47591	Curative powders claimed. Meets requirements of the P. or P. Act.
	" 2.....	10.0	1.8	"	"		



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Description as found on the label.
				Quantity.	Cents	Manufacturer.	Furnisher.	

DISTRICT OF VICTORIA—

1911.								Victoria, B.C. No. 1109 The Proprietary or Patent Medicine Act.
May 13	Headache Wafers.	47592	F. J. Williams, Victoria, B.C.	3 pkg.	75	.....	Nat. Drug & Chem. Co., Victoria, B.C.	This sample is described like No. 43808.
" 13	"	47593	Nat. Drug & Chem. Co., Ltd., Victoria.	3 "	75	Vendors .....	.....	This sample is described like No. 42276.
" 13	Headache Powders	47594	"	3 "	75	The T. Milburn Co., Ltd., Toronto.	.....	This sample is described like No. 42281.



SESSIONAL PAPER No. 14  
HEADACHE POWDERS.

Directions for use as found on the label.	Remarks.	RESULTS OF ANALYSIS.				No. of Sample.	Remarks and Opinion of the Chief Analysis.
		Weights of Contents of one powder, grains.	Acetanilide = Anti-febrin, grains.	Phenacetin, grains.	Phenazone = Anti-pyrin, grains.		

Concluded.

.....	Powder No. 1.....	16·8	6·3	None.	None.	47592	Acetanilide declared. Meets requirements of P. or P. Act.
.....	" " 2.....	17·3	6·6	" .	" .		
.....	Powder No. 1.....	6·4	None.	None.	None.	47593	Contains aspirin. Meets requirements of Act.
.....	" " 2.....	7·4	" .	" .	" .		
.....	Powder No. 1.....	14·3	6·5	.....	.....	47594	Claims curative properties. Acetanilide declared. Meets requirements of P. or P. Act.
.....	" " 2.....	13·8	6·3	.....	.....		



3 GEORGE V., A. 1913

## APPENDIX G.

## BULLETIN No. 231—STOCK FEED—BRAN. SHORTS. CHOP FEED.

OTTAWA, February 2, 1912.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to submit herewith a report upon two hundred and ninety-eight (298) samples of feeding stuffs or stock feeds, purchased throughout the Dominion in April, May and June of last year. This is the first systematic inspection of these articles, made under the Commercial Feeding Stuffs Act of 1909.

It is to be observed that the Act in question classifies feeding stuffs as follows:—

I.—Those which may be sold without registration.

These are of two subclasses:—

1. Such as, from their nature, may be appraised as well or better by the buyer, than by the officials of this department. This subclass includes hay, straw, roots, wet brewers' grains.
2. Such as are sold under names specifically defining the article, and capable of exact standardization under section 26 of the Adulteration Act.

II.—Those which may only be sold when duly registered.

The present inspection has regard only to such feeds as fall under subclass 2, of class 1, and comprises bran, shorts or middlings and chop feeds.

These feeding stuffs are defined by an Order in Council, dated May 1, 1911 (published as Circular G. 968), as follows:—

<sup>23</sup>  
FOOD.

G. 968.  
AMENDING G. 932.  
10,000.

DEPARTMENT OF INLAND REVENUE,  
OTTAWA, May 3, 1911.

## MEMORANDUM.

Under the authority of an Order of His Excellency in Council, bearing date the first day of May, instant, paragraphs 13, 14 and 15 of the Order in Council of the 29th October, 1910, establishing standards of quality for grain products, have been cancelled and the following substituted in lieu thereof:—

13. BRAN is a product of the milling of wheat or other grain, and contains not less than fourteen (14) per cent of proteids, not less than three (3) per cent of fat, not more than ten (10) per cent of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'

14. SHORTS OR MIDLINGS is the coarser material sifted out from the products of a second treatment of the grain by crushing the coarsely ground material that is sifted out from the bran after the first grinding; and contains not less than fifteen (15) per cent of proteids, not less than four (4) per cent of fat, not more than eight



## SESSIONAL PAPER No. 14

(8) per cent of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'

15. CHOP-FEED is whole grain of one or more kinds more or less finely ground, and contains not less than ten (10) per cent of proteids not less than two (2) per cent of fat, not more than ten (10) per cent of crude fibre and must be free from vital seeds of any of the noxious weeds defined by the Governor in Council under 'The Seed Control Act.'

These amended standards will come into force on the seventh day of June proximo.

W. J. GERALD,  
*Deputy Minister.*

Definitions of bran, shorts and chop feed were made legal by Order in Council of October 29, 1910, taking effect December 5, 1910. The above quoted Order in Council differs only from the earlier one in introducing the clause 'And must be free from vital seeds of any of the noxious weeds, defined by the Governor in Council under the Seed Control Act.'

While the Feeding Stuffs Act provides for the sale of bran, shorts and chop feeds without registration, it does not prevent the registration of these feeds by any manufacturer who chooses to take necessary steps to that end. Nothing sold without registration is legally recognized as bran, shorts or chop, which does not reach the minimum of value legally established for its species; but there is nothing to prevent a producer who knows his goods to be better or worse than the legal minimum, from registering such goods, and publishing with them a guarantee of stated values. In this case, however, the producer must hold himself responsible for the quality of such guaranteed feeds; and an article of bran (for example) which would be quite legal if offered simply as bran, may be judged as adulterated if it fail to meet a higher standard, set and guaranteed by the manufacturer.

The Feeding Stuffs Act of 1909 was based upon experience gained through repeated inspections of cattle feeds as found on our markets. The main facts of the case will be found recorded in Bulletins 116 (1906), 156 (1908), and 191 (1909). The standards fixed for the classes of feeds, now particularly under consideration, were consequent upon the study of 545 samples of bran, shorts and chop feed reported in Bulletin No. 191.

## BRAN.

For this article the following minimum values are legalized:—

Fat—Not less than 3 per cent.

Proteids—Not less than 14 per cent.

Fibre—Not more than 10 per cent.

That these limits are reasonable is fully established by the result of the present inspection.

Seventy-seven (77) samples, out of a total of 78 samples purchased as bran, are found to be legally genuine as far as nutritive value goes, and their average values are as follows:—

	Per cent.
Fat.....	4.29
Proteids.....	15.17
Fibre.....	8.60



3 GEORGE V., A. 1913

It will be noted that the Act (section 15) provides that 'A deficiency of one per cent of the protein or fat, or an excess of two per cent of fibre, shall not be considered as evidence of fraudulent intent, if the total value of the feeding stuff, in nutritive materials, is substantially equivalent to the guaranteed statement.'

One sample (No. 36946) is low in proteids as well as high in fibre, and must be regarded as adulterated under the Act.

Two samples of bran, 48418 and 40655 are contaminated with weed seeds.

SHORTS; MIDLINGS.

These terms are considered as equivalent for the purpose of defining legal minimum values. These values are fixed by Order in Council as follows:—

Fat.. . . . .	4 per cent minimum.
Proteids.. . . . .	15 " " "
Fibre.. . . . .	8 " " maximum.

Seventy-three (73) samples of the present collection are sold as shorts, and sixty-eight (68) samples as middlings.

There seems to be much ambiguity among millers and dealers as to the application of these terms. This fact was pointed out in Bulletin No. 191. Table III. (pp. 42 to 46 of Bull. 191) exhibits a great range of values for 258 samples purchased as shorts or middlings in 1909; but the extremes of value do not indicate differences in the application of the terms such as would warrant shorts being defined separately from middlings.

Considering the whole 258 samples in question, the record is as follows:—

	Maximum.	Minimum.	Mean.
Moisture.. . . . .	13.56	6.45	10.54
Fat.. . . . .	6.88	0.95	4.04
Proteids.. . . . .	18.93	10.00	15.25
Crude fibre.. . . . .	12.15	0.22	5.63
Ash.. . . . .	5.74	0.88	3.63
Carbohydrates.. . . . .	74.18	51.04	60.55

When the samples sold as shorts in 1909 (150 in number) are considered by themselves, the results are as follows:—

	Fat.	Proteids.	Fibre.
Means.. . . . .	4.93	15.63	5.88
Maxima.. . . . .	6.53	18.93	11.90
Minima.. . . . .	1.60	10.00	1.06

One hundred and six (106) samples sold as middlings in 1909, give the following results:—

	Fat.	Proteids.	Fibre.
Means.. . . . .	3.67	14.77	4.96
Maxima.. . . . .	6.88	18.00	12.15
Minima.. . . . .	0.95	11.19	0.22

A considerable number of samples, which appear to answer a description of low grade flour, were found in the above collection; but these were supplied indiscriminate as shorts or middlings, as indicated by the maxima for fibre and for fat, though most of them were sold as middlings.



## SESSIONAL PAPER No. 14

In order to discover whether the present collection indicates any accepted distinction between the terms, I have collated the results for 72 out of 73 samples sold as shorts, and for 54 out of 68 samples sold as middlings, being in each case the number of samples respectively, which meet the requirements of legal definition.

Seventy-two (72) samples of shorts give results as follows:—

	SHORTS		
	Fat.	Proteids.	Fibre.
Means.. . . . .	4.65	16.20	6.3
Maxima.. . . . .	6.48	18.46	8.0
Minima.. . . . .	3.44	14.00	3.9

Fifty-four (54) samples of middlings give the following results:—

	Fat.	Proteids.	Fibre.
Means.. . . . .	4.47	15.95	5.2
Maxima.. . . . .	6.26	18.02	8.1
Minima.. . . . .	3.02	14.13	1.4

The results appear to justify the conclusion that the article sold as shorts is not substantially different from the article sold as middlings; and this conclusion is corroborated by the expressed opinion of many millers, in answer to questions by our inspectors. At the same time it is to be noted that samples characterized by very low fibre, low fat and a high starch content (indicating flour), are usually sold as middlings, rather than as shorts.

Examples of this are found in the following:—

Number	Fat.	Proteids.	Fibre.	
46084 .....	2.16	10.37	1.5	low in proteids and fibre.
36956 .....	1.55	12.73	0.7	" fat and fibre.
43271 .....	2.08	12.51	0.8	" "
43281 .....	2.32	13.26	1.3	" "
47413 .....	2.66	15.11	1.9	low in fat and fibre.
47414 .....	3.16	12.56	1.8	" proteids and fibre.
38185 .....	2.66	11.42	0.9	" " fat and fibre.
38189 .....	2.02	12.03	0.5	" " "
47611 .....	2.37	14.61	1.1	" fat and fibre.
47618 .....	1.98	13.04	0.8	" "
47621 .....	2.28	12.86	1.0	" "

Feeds of this kind should be sold as feed-flour; or by some name which distinguished them from legal shorts or middlings. While they possess considerable value for feeding purposes, they must be regarded as adulterated under the Act when offered as shorts or middlings. Their low fibre content is an advantage from the point of view of nutritive value, since this is replaced by starch in amount equivalent to the difference between the legal maximum for fibre (8 per cent) and the actual fibre present.

I am convinced that in none of the above listed samples is there any evidence of intended fraud. The irregularity is apparently due to ignorance of legal requirements for shorts (middlings), and a mistaken idea that a low grade flour is even better value, than middlings as usually understood. I feel justified in recommending that for this first inspection under the Feeding Stuffs Act, leniency be exercised towards the vendors, and their attention called, to the requirements of the Act.



The results for shorts and middlings are thus summarized:—

	Sold as	
	Shorts.	Middlings.
Comply with legal requirements.....	72	54
Misnamed (feed flour).....	0	11
Passed, as close to limit value.....	1	2
Adulterated under the Act.....	0	1
	73	68
Total.....	141	

None of the samples of this class have been found to contain vital weed seeds.

CHOP FEEDS

Seventy-eight (78) samples of the present collection are sold under this name. The legal standard for chop-feed is as follows:—

- Fat..... 2 per cent (minimum).
- Proteids..... 10 “ “
- Fibre..... 10 “ “ (maximum).

Sixty-two (62) samples meet these requirements and are judged as genuine so far as nutritive value is concerned. Six other samples are so near to standard values that I have advised them to be passed, in view of the fact that this is the first inspection under the Act of 1909.

Six samples are so markedly below the standard values that they must be classed as adulterated under the Act.

These are the following:—

Number.	Deficiency in		Excess of Fibre.
	Fat.	Proteids.	
47017.....	0.41	1.19	17.9
47615.....		3.42	8.8
48418.....		2.05	11.0
43859.....	0.73	1.27	18.0
41207.....			8.6
38979.....	0.21	1.13	9.2

Four samples, which meet requirements as regards feeding value, are adulterated by containing vital weed seeds.

I have pleasure in acknowledging the courtesy of the Department of Agriculture in corroborating the presence of vital weed seeds in the following samples:—

- Bran..... No. 40655— 160 seeds per lb.
- “ 48418— 160 “ “ “
- Chop feed..... “ 46620— 320 “ “ “
- “ 46077— 2,464 “ “ “
- “ 38978— 32 “ “ “
- “ 40669— 4 “ “ “
- “ 40670— 64 “ “ “



## SESSIONAL PAPER No. 14

In applying the clause, 'And must be free from vital seeds of any of the noxious weeds, &c., I have interpreted this to mean not more than five seeds per pound. There is a practical limit to the possibility of removing weed seeds from grain. In interpreting the Seed Control Act, it is, I believe, the accepted rule to allow one seed per pound, where the grain is used for seeding purposes. It seems reasonable to permit a larger limit of error when the grain is used for feeding purposes.

No. 48043 is a sample of cotton seed meal, which was obtained through an error. The brand is legally registered and meets the requirements of its guarantee.

The following is a synopsis of the results of this inspection:—

	Bran.	Shorts (Middlings.)	Chop.
Genuine.....	74	126	62
Incorrectly named.....	0	11	0
Passed as close to limit values.....	1	3	6
Adulterated as below values.....	1	1	6
"    as containing vital weed seeds.....	2	0	4
	78	141	78

	297 samples.
Cotton seed meal.....	1
Total.....	298

I beg to recommend the publication of this report as Bulletin No. 231.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
Chief Analyst.



3 GEORGE V., A. 1913  
BULLETIN No. 231—

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF NOVA SCOTIA—								
1911.								
May 10	Stock Feeds.	46601	I. B. Shaffner & Co., Halifax, N.S.	5 lbs.	Nil.	Peterboro Cereal Co., Peterboro, Ont.	Manufacturers.	.....
" 11		46602	B. O. Bishop, Dartmouth, N.S.	5 "	6	Ogilvie Milling Co., Montreal.	Wentzell's, Ltd., Halifax, N.S.	.....
" 11		46603	Wentzell's, Ltd., Halifax, N.S.	5 "	5		Manufacturers.	.....
" 12		46604	J. S. Cashen & Sons, Halifax, N.S.	5 "	10	Campbell Milling Co., Toronto.		.....
" 19		46605	C. B. McMullen, Truro, N.S.	5 "	N	Wolverton Milling Co., Wolverton, Ont.		.....
" 12		46606	J. S. Cashen & Son, Halifax, N.S.	5 "	10	Campbell Milling Co., Toronto.		Shorts. ....
" 18		46607	F. A. Shaw, Halifax, N.S.	5 "	7		F. W. Fraser, Halifax, N.S.	.....
" 18		46608	F. W. Fraser, Halifax, N.S.	5 "	7		Manufacturers.	.....
" 18		46609	S. C. Thompson, Halifax, N.S.	5 "	7		W. Muir & Son, Halifax.	.....
" 22		46610	A. & W. Smith & Co., Halifax, N.S.	5 "	Nil.	Quaker Oats Co., Peterboro, Ont.	Manufacturers.	(Bell Cow Brand.)
" 11		46611	I. B. Shaffner & Co., Halifax, N.S.	5 "	"	Canada Flour Mills Co., St. Catharines.		Middlings .....
" 11		46612	Nova Scotia Milling Co., Dartmouth, N.S.	5 "	"	Canada Cereal Co., Toronto.		" .....
" 11		46613	Wentzell's, Ltd., Dartmouth, N.S.	5 "	5	Jno. Campbell Co., St. Thomas, Ont.		" .....
" 19		46614	C. B. McMullen, Truro N.S.	5 "	Nil.	Wolverton Milling Co., Wolverton, Ont.		" .....
" 22		46615	H. W. Brown, Halifax, N.S.	5 "	8	Unknown. . .	J. A. Farquhar & Co., Halifax.	.....
" 11		46616	Nova Scotia Milling Co., Dartmouth, N.S.	5 "	Nil.	G. Carter & Son, St. Mary's, Ont.	Manufacturers.	Chop Feed. (Barley, Oats and Corn.)
" 11		46617	A. Gunn & Co., Halifax, N.S.	5 "	"	Vendors .....		O. & B. Chops. ....
" 16		46618	S. L. Cross, Kentville, N.S.	5 "	"	Ogilvie Milling Co., Montreal.	Manufacturers.	Wheat moulee. . . .
" 16		46619	R. E. Harris & Son, Wolfville, N.S.	5 "	"			Moulee. ....
" 17		46620	Shand Bros., Windsor, N.S.	5 "	"	Tillson's, Tillsonburg, Ont.		B. O. C. Crushed Grain.



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

R. J. WAUGH—INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	4.43	.....	15.61	9.6	Bran tissues, no weeds.	46601	Genuine.
.....	.....	.....	4.79	.....	15.49	9.2	"	46602	"
.....	.....	.....	4.59	.....	16.76	7.8	"	46603	"
.....	.....	.....	4.61	.....	16.10	8.0	"	46604	"
.....	.....	.....	4.33	.....	14.52	8.7	"	46605	"
.....	.....	.....	4.52	.....	17.59	7.4	As claimed, no weeds.	46606	"
.....	.....	.....	4.92	.....	16.80	7.3	"	46607	"
.....	.....	.....	5.08	.....	14.83	7.9	"	46608	"
.....	.....	.....	4.08	.....	16.06	7.2	As claimed, no weed seeds.	46609	"
.....	.....	.....	4.92	.....	17.76	7.4	"	46610	"
.....	.....	.....	4.08	.....	16.49	6.4	"	46611	"
.....	.....	.....	3.84	...	15.14	5.2	"	46612	"
.....	.....	.....	4.08	.....	15.40	6.0	"	46613	"
.....	.....	.....	4.80	.....	15.92	6.3	"	46614	"
.....	.....	.....	4.08	.....	14.96	5.1	"	46615	"
.....	.....	.....	2.78	...	12.25	6.5	"	46616	"
.....	.....	.....	4.10	.....	9.63	4.2	"	46617	"
.....	.....	.....	4.42	.....	15.22	5.0	"	46618	"
.....	.....	.....	4.10	.....	15.22	3.7	"	46619	"
.....	.....	.....	3.54	.....	10.89	4.7	Weed seeds.	46620	Adulterated with weed seeds, 320 seeds per lb.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF PRINCE EDWARD ISLAND—

1911.								
May 12	Stock Feeds.	46066	P.E.I. Hay & Produce Co., Ch'town, P.E.I.	5 lbs.	Nil.	Ogilvier, Montreal.		Bran.....
" 15	"	067	A. Horne & Co., Ch'town, P.E.I.	5 "	"	Canadian Cereal & Milling Co., Toronto.		"
" 23	"		Frank Gates, Ch'town Royalty west, P. E.I.	5 "	"	Gates Mills, Ch'town Royalty west, P. E.I.		"
" 23	"	46069	John Andrews, Ch'town Royalty west, P. E.I.	5 "	"	Andrews Mills, Ch'town Royalty east, P. E.I.		"
" 26	"	46070	F. L. McNutt	5 "	10		A. Horne & Co., Charlottetown, P.E.I.	"
" 12	"	46076	P.E.I. Hay & Produce Co., Ch'town, P.E.I.	5 "	Nil.	Quaker Oats Co., Peterboro, Ont.		Chop Feed.....
" 12	"	46077	A. Horne & Co., Ch'town, P.E.I.	5 "	"	The Campbell Milling Co., W. Toronto.		"
" 15	"	46078	A. Horne & Co., Ch'town, P.E.I.	5 "	"	Atlantic Milling Co., Pictou, N.S.		"
" 15	"	46079	Auld Bros., Ch'town, P.E.I.	5 "	"	Quaker Oats Co., Peterboro.		" (Schumaker).
" 15	"	46080	Auld Bros., Ch'town, P.E.I.	5 "	"	The Tillson Co., Tillsonburg.		Chop Feed.....
" 12	"	46081	P.E.I. Hay & Produce Co., Ch'town, P.E.I.	5 "	"	T. H. Taylor Mfg. Co., Ch'tham, Ont.		Middlings.....
" 15	"	46082	A. Horne & Co., Ch'town, P.E.I.	5 "	"	The Campbell Milling Co., Toronto.		"
" 23	"	46083	Frank Gates, Ch'town Royalty west, P. E.I.	5 "	"	Gates Mills, Ch'town Royalty west, P. E.I.		"
" 23	"	46084	John Andrews, Ch'town Royalty east, P. E.I.	5 "	"	Andrews Mills, Ch'town Royalty east, P. E.I.		"
" 26	"	46085	R. E. Mutch & Co., Ch'town, P.E.I.	5 "	"	The Woodburn Milling Co., Glencoe, Ont.		"



SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					



WM. A. WEEKS—INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	4.44	.....	17.06	7.4	As claimed, no seeds.	46066	Genuine.
.....	.....	.....	4.10	.....	13.96	8.4	"	46067	"
.....	.....	.....	4.36	.....	14.31	6.1	"	46068	"
.....	.....	.....	4.24	.....	13.78	6.8	"	46069	"
.....	.....	.....	3.52	.....	14.48	8.4	"	46070	"
.....	.....	.....	2.70	.....	9.55	6.6	"	46076	"
.....	.....	.....	3.76	.....	11.46	8.0	Weed seeds.....	46077	Adulterated with weed seeds, 2,464 seeds per lb.
.....	.....	.....	2.22	.....	9.65	1.8	As claimed, no seeds.	46078	Genuine.
4.00	10.50	10.50	2.60	.....	10.56	9.2	"	46079	"
.....	.....	.....	5.04	.....	15.44	16.4	"	46080	Excess fibre, high in fat and proteids. Pass.
.....	.....	.....	4.06	.....	15.09	7.6	As claimed, no weed seeds.	46081	Genuine.
.....	.....	.....	4.46	.....	14.92	7.1	"	46082	"
.....	.....	.....	.....	3.30	13.60	2.4	"	46083	Below standard in proteids. Pass.
.....	.....	.....	.....	2.16	11.20	1.5	Flour, no weed seeds.	46084	Low in fat and in proteids. Should be sold as feed flour.
.....	.....	.....	.....	4.13	14.70	5.1	As claimed, no weed seeds.	46085	Genuine.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—

1911.								
May 11	Stock Feeds.	45499	C. H. Peters, Sons, Ltd., St. John, N.B.	5 lbs.	10	The Quaker Oats Co., Peterboro, Ont.		Bran. ....
" 11	"	45500	L. C. Prime, St. John, N.B.	5 "	10	Cereal & Milling Co., Ltd.		" .....
" 16	"	45501	John McKnight, Fredericton, N.B.	5 "	10	Campbell Milling Co., Toronto, Ont.		" ( <i>Ball Rush Brand.</i> )
" 25	"	45502	A. F. Randolph & Sons, Chatham, N.B.	5 "	15	Ogilvie Milling Co., Montreal		Bran, ( <i>Ogilvie</i>  )
" 25	"	45503	J. B. Snowball Co., Ltd., Chatham, N.B.	5 "	10	S. J. Cherry, Preston, Ont.		Bran Cherry's. ....
" 16	"	45504	G. T. Whelpley Estate, Fredericton, N.B.	5 "	15	Western Canada Flour Mills Co., Ltd., Winnipeg.		Shorts, ( <i>Registration No. 68.</i> )
" 16	"	45505	F. H. Everett, Fredericton, N.B.	5 "	10	Maple Leaf Milling Co., Toronto.		Shorts. ....
" 23	"	45506	J. H. Steeves, Moncton, N.B.	5 "	15	Ogilvie Flour Mills, Montreal.		" .....
" 23	"	45507	Reed Co., Ltd., Moncton, N.B.	5 "	15	Western Flour Mills Co., Ltd.		Middlings, ( <i>Registered No. 64, Analysis on bags.</i> )
" 25	"	45508	Jno. McLaggan, Chatham, N.B.	5 "	15	The Jno. Campbell Co., Ltd., St. Thomas, Ont.		Middlings, ( <i>Campbell's.</i> )
" 2	"	45509	James Collins, St. John, N.B.	5 "	10	Lake of the Woods Milling Co., Montreal.		Middlings. ....
" 11	"	45510	C. H. Peters Sons, St. John, N.B.	5 "	10	The Quaker Oats Co., Peterboro, Ont.		" .....
" 11	"	45511	J. Harrison & Co., St. John, N.B.	5 "	Nil.	Maple Leaf Flour Milling Co., Toronto.		" .....
" 19	"	45512	J. W. McPhail, Perth, N.B.	5 "	15	The Ogilvie Flour Mills Co., Ltd., Montreal.		" ( <i>Ogilvie's</i> )
" 23	"	45513	Toombs & Son, Moncton, N.B.	5 "	15	Canadian Cereal & Milling Co., Ltd., Toronto.		Middlings, ( <i>Tillsons Choice.</i> )
" 2	"	45514	L. C. Prime & Co., St. John, N.B.	5 "	10	The Quaker Oats Co., Peterboro, Ont.		Chop Feed, ( <i>Banner Brand.</i> )



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

JNO. C. FERGUSON—INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	...	4.46	15.75	8.5	As claimed, no weed seeds.	45499	Genuine.
.....	.....	.....	.....	4.34	14.09	9.6	"	45500	"
.....	.....	.....	.....	4.40	14.48	8.6	"	45501	"
.....	.....	.....	.....	4.26	16.58	7.9	"	45502	"
.....	.....	.....	.....	4.20	15.40	8.1	"	45503	"
4.39	16.73	5.20	3.94	.....	15.22	4.2	"	45504	"
.....	.....	.....	4.12	.....	15.09	7.5	"	45505	"
.....	.....	.....	4.32	.....	16.34	6.3	"	45506	"
6.04	15.36	7.51	5.74	.....	17.02	5.6	"	45507	Genuine; meets requirements of claim.
.....	.....	.....	4.36	.....	14.87	4.8	"	45508	Genuine.
.....	.....	.....	5.12	.....	17.19	4.8	"	45509	"
.....	.....	.....	4.72	.....	14.92	8.1	"	45510	"
.....	.....	.....	4.58	.....	15.84	6.6	"	45511	"
.....	.....	.....	3.94	.....	16.10	5.2	"	45512	"
.....	.....	.....	5.00	.....	17.85	5.7	"	45513	"
3.50	8.50	9.00	3.26	.....	9.35	6.6	"	45514	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NEW BRUNSWICK—

1911.								
May 16	Stock Feeds.	45515	Jno. Gibson & Son, Fredericton, N.B.	5 lbs.	Nil.	The Campbell Milling Co., Ltd., West Toronto.	.....	Chop Feed, ( <i>General Feeds, Steam Rolled</i> )
" 17	"	45516	J. M. Fripp, Woodstock, N.B.	5 "	10	Meduxnakeag Roller Mills, Woodstock, N.B.	.....	Chop Feed.....
" 19	"	45517	J. W. McPhail, Perth, N.B.	5 "	15	The Ogilvie Flour Mills Co., Ltd., Montreal.	.....	Chop Feed, (Ogilvie's Puritan Feed), <i>Registered No. 10<sup>1</sup>/<sub>2</sub> Puritan.</i>
" 22	"	45518	W. B. McKay & Co., Ltd., Sussex, N.B.	5 "	15	"	.....	Chop Feed, (Ogilvie's Hercules. Pure corn, oats and barley feed. <i>Regs.</i> )
" 25	"	45519	J. B. Snowball Co., Ltd., Chatham, N.B.	5 "	10	S. J. Cherry, Preston, Ont.	.....	Shorts .....

DISTRICT OF QUEBEC—

May 9	Stock Feeds.	36946	Pierre Renaud, 597 rue St. Valier, Quebec.	5 lbs.	15	Unknown....	Unknown ..	Bran. ....
" 10	"	36947	Napoléon Bertrand, 685 rue St. Valier, Que.	5 "	10	Alexander Brown, Toronto.	Manu- facturer.	" .....
" 12	"	36948	W. Carrier & fils, 108 rue Dalhousie, Quebec	5 "	Nil.	Ogilvie Flour Mills.	Manu- facturers.	" .....
" 15	"	36949	P. G. Busière & Cie, 89 rue Dalhousie, Quebec	5 "	"	Lake of the Woods.	"	" .....
" 17	"	36950	D. E. Drolet, 52 rue Dalhousie, Quebec.	5 "	"	Ogilvie Flour Mills.	"	" .....
" 10	"	36951	Nap. Renaud, 685 rue St. Valier, Quebec.	5 "	15	Alex. Brown, Toronto.	Manu- facturer.	Shorts .....
" 15	"	36952	P. G. Busière & Cie, 89 rue Dalhousie, Quebec	5 "	Nil.	Ogilvie Flour Mills.	Manu- facturers.	" .....
" 15	"	36953	W. Carrier & fils, 108 rue Dalhousie, Quebec	5 "	"	"	"	" .....
" 17	"	36954	Désiré E. Drolet, 52 rue Dalhousie, Quebec	5 "	"	West'n Canada Flour Mills.	"	" .....
" 17	"	36955	E. M. Lennon, St. James st., Quebec.	5 "	"	"	"	" .....
" 9	"	36956	Pierre Renaud, 597 rue St. Valier, Quebec.	5 "	15	Unknown....	Unknown ..	Middlings.....



SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

JNO. C. FERGUSON—INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	2.60	.....	16.93	4.7	As claimed, no weed seeds.	45515	Genuine.
.....	.....	.....	3.08	.....	11.90	7.3	"	45516	"
- 4.00	- 9.50	- 6.50	2.88	.....	10.05	8.4	"	45517	"
.....	.....	.....	3.00	.....	10.37	9.1	"	45518	"
.....	.....	..	4.68	.....	15.31	5.2	"	45519	"

F. X. W. E. BELAND—INSPECTOR.

.....	.....	.....	3.56	12.90	15.1	As claimed, no seeds...	36946	Low in proteids, high in fibre. Adulterated under the Act.
.....	.....	..	4.15	13.78	8.5	As claimed, no weed seeds.	36947	Genuine.
.....	.....	.....	4.87	14.96	7.1	"	36948	"
.....	.....	.....	4.51	15.62	8.9	"	36949	"
.....	.....	.....	4.59	16.71	7.2	"	36950	"
.....	.....	.....	4.08	14.61	7.7	As claimed, no weeds.	36951	"
.....	.....	.....	3.80	17.02	6.5	"	36952	"
.....	.....	.....	4.56	17.19	6.1	As claimed, no weed seeds.	36953	"
.....	.....	.....	3.44	14.22	2.8	"	36954	"
.....	.....	.....	4.12	17.85	6.7	"	36955	"
.....	.....	.....	1.55	12.73	0.7	Floury, no weed seeds.	36956	Low in fat and in proteids. Should be sold as feed-flour.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Unit.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC—

1911.								
May	10	Stock Feeds.	36957 Nap. Bertrand, 685 rue St. Valier, Quebec.	15 lbs.	15	Alex. Brown, Co., Toronto.	Manufacturer.	Middlings.....
"	12		36958 W. Carrier & fils 108 rue Dalhousie, Quebec	5	Nil.	Ogilvie Flour Mills.	Manufacturer.	Chop Feed.....
"	17		36959 Désiré E. Drolet, 52 rue Dalhousie, Quebec	5		Lake of the Woods.		Middlings.....
"	17		36960 E. M. Lennon, St. James st., Quebec.	5		Maple Leaf Milling Co.		".....
"	9		36961 Pierre Renaud, 597 rue St. Valier, Quebec.	5	15	Unknown.....	Unknown..	Chop Feed.....
"	10		36962 Nap. Bertrand, 685 rue St. Valier, Quebec.	5	15	R. C. Muir, Quebec.	Manufacturer.	".....
"	12		36963 W. Carrier & fils 103 rue Dalhousie, Quebec	5	Nil.	Ogilvie Flour Mills.	Manufacturer.	".....
"	15		36964 P. G. Busière & Cie, 89 rue Dalhousie, Quebec	5	"	Lake of the Woods.	"	".....
"	17		36965 Désiré E. Drolet, 52 rue Dalhousie, Quebec	5	"	Ogilvie Flour Mills.	"	".....

DISTRICT OF ST. HYACINTHE—

May	9	Stock Feeds.	38960 M. K. McKenzie, Richmond, P. Q.	3 lbs.	Nil.	Ogilvies.....		Bran.. ..
"	10		38961 J. L. Legendre, Asbestos.	4 "	"	".....		".....
"	17		38962 Henri Hebert, St. Leonard Junction.	3 "	"	Saskatoon Milling Co., Ltd., Saskatoon.		".....
"	17		38963 Albert Duguay, St. Gregorie de Nicolet.	3 "	"	Western Canada Flour-mills Co.		".....
"	22		38964 Oct. Beauchamp, St. Simon de Bagot.	3 "	"	Ogilvies.....		".....
"	9		38965 McKee Bros., Richmond, P. Q.	5 "	"	Western Canada Flour-mills Co.		Shorts.....
"	9		38966 A. Milette, Windsor Mills	5 "	"	Tavistock Milling Co., Tavistock, Ont.		".....
"	10		38967 J. L. Legendre, Asbestos.	5 "	"	Ogilvies.....		".....
"	22		38968 Oct. Beauchamp, St. Simon de Bagot.	3 "	"	".....		".....



## SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

F. X. W. E. BELAND—INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	.....	4.28	14.35	4.3	As claimed, no weed seeds.	36957	Genuine.
.....	.....	.....	.....	3.83	13.17	6.6	"	36958	"
.....	.....	.....	4.00	...	17.46	7.8	As claimed, no seeds...	36959	"
.....	.....	.....	4.24	.....	16.10	5.2	As claimed, no weed seeds.	36960	"
.....	.....	.....	3.26	.....	12.16	9.5	"	36961	"
.....	.....	.....	2.86	.....	9.16	6.9	"	36962	"
.....	.....	.....	2.90	.....	10.81	9.9	"	36963	"
.....	.....	.....	2.06	...	10.59	12.2	Oat hulls, no weed seeds.	36964	Fibre high. Pass.
.....	.....	.....	4.26	...	9.76	7.5	As claimed, no seeds...	36965	Genuine.

## J. C. ROULEAU—INSPECTOR.

.....	.....	.....	4.79	.....	16.62	7.7	As claimed, no weed seeds.	38960	Genuine.
.....	.....	.....	4.69	...	16.97	7.4	"	38961	"
.....	.....	.....	4.57	.....	17.32	6.6	"	38962	"
.....	.....	.....	4.63	.....	15.44	7.9	"	38963	"
.....	.....	.....	4.73	.....	17.10	7.7	"	38964	"
.....	.....	.....	4.56	.....	17.59	5.5	"	38965	"
.....	.....	.....	.....	4.59	16.67	7.0	"	38966	"
.....	.....	.....	.....	4.00	15.01	7.5	"	38967	"
.....	.....	.....	.....	4.14	16.36	6.9	"	38968	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacture.	Furnisher.	

DISTRICT OF ST. HYACINTHE—

1911.								
May 22	Stock Feeds.	38969	A. Lefebvre, St. Simon de Bagot.	5 lbs.	Nil.	Lake of the Woods.	J. M. Palar-dy, St. Hyacinthe.	Shorts.....
" 9	"	38970	M. K. McKenzie, Richmond, P. Q.	3 "	"	Renfrew Roller Mills Co., Ltd., Renfrew, Ont.	"	Middlings .....
" 9	"	38971	A. Milette, Windsor Mills	5 "	"	Seaforth Milling Co., Seaforth, Ont.	"	" .....
" 10	"	38972	J. L. Legendre, Asbestos.	5 "	"	Ogilvie Milling Co., Montreal	"	" .....
" 11	"	38973	L. O. Pepin & fils, Victoria-ville.	4 "	"	Lake of the Woods Milling Co., Montreal.	"	" .....
" 11	"	38974	C. O. Genest & fils, Sherbrooke	4 "	"	"	"	Special middlings...
" 9	"	38975	McKee Bros., Richmond, P. Q.	4 "	"	Quaker Oats Co., Peterboro, Ont.	"	Chop Feed. (Reg. No. 13).
" 9	"	38976	R. & N. Robitaille freres, Windsor Mills	4 "	"	"	"	Chop Feed.....
" 10	"	38977	Vilandre & freres, Danville.	3 "	7	Lake of the Woods Milling Co., Montreal.	"	Wheat chop .....
" 18	"	38978	J. Comteau, Nicolet.	3½ "	7	Ogilvie Milling Co., Montreal	"	Eureka chop. (Reg. No. 28).
" 18	"	38979	Alb. Duguay, St. Gregoire de Nicolet.	4 "	Nil.	Western Canada Flour-mills, Co.	"	Moulee, K.....

DISTRICT OF MONTREAL—

May 3	Stock Feeds.	40651	Bruneau, Currie & Co. Place Youville, Montreal.	5 lbs.	Nil.	"	"	Bran. ....
" 3	"	40652	Jas. Scott & Co. Ltd., St. James St. Montreal.	"	"	Lake of the Woods Milling Co. Ltd.	"	" .....
" 5	"	40653	W. L. Hogg, Notre Dame East, Montreal	"	5	Maple Leaf Milling Co. Ltd.	"	" .....
" 8	"	40654	Ogilvie Flour Mills Co. Ltd., Montreal.	"	Nil.	Vendors .....	"	" .....
" 11	"	40655	Lake of the Woods Milling Co. Ltd., Montreal.	"	"	"	"	" .....



## SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

J. C. ROULEAU, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	As claimed, no weed seeds.		
.....			5.00	....	17.94	5.7		38969	Genuine.
.....			4.24	...	16.14	6.4	" ..	38970	"
.....				3.67	15.00	7.7	" ..	38971	"
.....			4.40	.....	15.88	6.1	" ..	38972	"
.....			4.88	....	17.28	5.3	" ..	38973	
.....				4.71	17.94	3.9	" ..	38974	"
4.00	10.50	10.50	2.84	.....	9.76	8.2	" ..	38975	Below claim in fat. Pass.
.....			3.20	....	11.29	7.7	" ..	38976	Genuine.
.....			3.98	.....	16.93	3.7	" ..	38977	"
5.00	11.31	8.63	3.28	....	12.90	10.0	As claimed, weed seeds, 32 seeds per pound.	38978	Genuine as chop, but below claim in fat. Adulterated with weed seeds.
.....				1.76	6.87	19.2	Excess hulls .. . . .	38979	Low in fat and proteids, high in fibre. Adulterated.

J. J. COSTIGAN, INSPECTOR.

.....	...	.....	4.00	...	13.13	9.2	As claimed, no seeds..	40651	Genuine.
..	.....	.....	4.26	...	15.27	7.7	" ..	40652	"
.....	.....	.....	4.74	.....	14.31	7.4	" ..	40653	"
.....	.....	.....	4.74	.....	16.97	6.9	" ..	40654	"
.....	.....	.....	4.20	.....	15.71	7.7	Weed seeds.....	40655	Adulterated with weed seeds, 160 seeds per pound.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MONTREAL—

1911.								
May	3 Stock Feeds.	40656	Bruneau, Currie & Co., Place Youville, Montreal.	5 lbs.	Nil.			Shorts.....
	5	40657	W. L. Hogg, Notre Dame East, Montreal	"	5			" .....
	8	40658	Ogilvie Flour Mills Co., Ltd. Montreal.	"	Nil.	Vendors .....		" .....
	11	40659	Lake of the Woods Milling Co. Ltd., Montreal.	"	"	" .....		" .....
	11	40660	B. Vaillancourt, 1195 St. Lawrence B., Montreal.	"	"	J. N. Coupal, Plantagenet Springs.		" .....
	3	40661	Bruneau, Currie & Co., Place Youville, Montreal.	"	"	Western Canada Milling Co., Brandon		Middling. ....
	3	40662	Jas. Scott, & Co. Ltd., St. James St. Montreal.	"	"	Lake of the Woods Milling Co. Ltd.		" .....
	5	40663	W. L. Hogg, Notre Dame East, Montreal	"	5	Campbell Milling Co. Ltd., Toronto..		" .....
	8	40664	Ogilvie Flour Mills Co. Ltd., Montreal.	"	Nil.	Vendors .....		" .....
	11	40665	Lake of the Woods Milling Co. Ltd., Montreal.	"	"	" .....		" .....
	5	40666	Bruneau, Currie & Co., Place Youville, Montreal.	"	"	McDonald and Robb, Valleyfield, P.Q.		Chop Feed. ....
	8	40667	Jas. Scott & Co. Ltd., St. James St. Montreal.	"	"	Bishop & Son, Crysler, Ont.		" .....
	7	40668	W. L. Hogg, Notre Dame East, Montreal	"	10	Vendor.. ..		" .....
	8	40669	Ogilvie Flour Mills Co. Ltd., Montreal.	"	Nil.			Chop Feed (Champion Brand.)
	11	40670	Lake of the Woods Milling Co. Ltd., Montreal.	"	"			Chop Feed (Ox meal Brand.)



SESSIONAL PAPER No. 14

STOCK FEEDS:

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

J. J. COSTIGAN, INSPECTOR.—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
....	....	....	4.86	..	15.75	6.8	As claimed, no weed seeds.	40656	Genuine.
...	...	...	5.36	.....	15.53	6.9	" " ..	40657	"
....	....	....	4.80	....	16.71	6.7	" " ..	40658	"
..	...	...	6.48	.....	17.10	6.9	" " ..	40659	"
.....	...	...	4.74	....	15.18	3.9	" " ..	40660	"
.....	...	...	4.22	.....	15.92	2.3	" " ..	40661	"
.....	...	...	4.96	.....	16.71	7.9	" " ..	40662	"
.....	...	...	6.26	.....	16.10	6.2	" " ..	40663	"
.....	...	...	5.02	.....	15.18	5.6	" " ..	40664	"
...	...	...	5.44	.....	16.58	4.6	" " ..	40665	"
.....	...	...	3.56	....	15.53	7.6	" " ..	40666	"
.....	...	...	2.60	.....	11.16	7.3	" " ..	40667	"
.....	...	...	3.20	.....	9.45	5.6	" " ..	40668	"
4.15	8.87	6.86	2.50	....	9.36	8.0	Some seeds. ....	40669	4 seeds per lb. Pass.
3.20	16.50	7.60	3.56	....	15.71	3.6	" .....	40670	64 seeds per lb. Adulterated.



3 GEORGE V., A. 1913  
BULLETIN No. 231—

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (As not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911.								
May	2 Stock Feeds.	43258	Wm. Scott & Co., Deschenes P.Q.	5 lbs.	7	Vendors...		Bran. ....
"	"	43259	The Dowd Milling Co., Ltd., Pakenham.	5 "	7	"		"
"	4 "	43260	The Dowd Milling Co., Quyon	5 "	7	"		"
"	9 "	43261	The Woods Mills Co., Smith Falls.	5 "	Nil	"		"
"	1 "	43262	Western Canada Flour Mills Co., Ltd., Ottawa.	5 "	7	"		Shorts Reg. No. 63, guaranteed analysis. Protein 18.38, Fat. 6.02, Fibre 7.99.
"	1 "	43265	The Maple Leaf Milling Co., Ltd., Ottawa.	5 "	7	"		Shorts. ....
"	1 "	43266	Wm. Scott & Co., Deschenes, P.Q.	5 "	7	"		"
"	1 "	43268	Western Canada Flour Mills Co., Ltd., Ottawa.	5 "	7	"		Middlings "Choice" Brand, guaranteed analysis. Protein 16.73, Fat. 4.44, Fibre 5.20.
"	1 "	43269	The Maple Leaf Milling Co., Ltd., Ottawa.	5 "	7	"		Middlings .....
"	2 "	43270	Wm. Scott & Co., Deschenes, P.Q.	5 "	7	"		"
"	3 "	43271	The Dowd Milling Co., Ltd., Pakenham.	5 "	7	"		"
"	2 "	43274	Wm. Scott & Co., Deschenes, P.Q.	5 "	7	"		Chop Feed, (Barley).
"	3 "	43275	The Dowd Milling Co., Ltd., Pakenham.	5 "	7	"		Chop Feed, (Oats & Barley).
"	4 "	43276	The Dowd Milling Co., Ltd., Quyon, P.Q.	5 "	7	"		Chop Feed.....
"	16 "	43280	Wm. R. Cummings, Cummings Bridge.	3 "	Nil	"		" (No. 1 all grain).
"	19 "	43281	J. W. Nesbitt & Co., 1095 Bank st., Ottawa.	5 "	10	Campbell & McNab, Douglas Ont.	Manufacturers.	Middlings .....
"	18 "	43284	A. E. Cameron, Brockville.	5 "	6	Ogilvie Milling Co., Montreal.	"	Bran. ....
"	3 "	43285	The Dowd Milling Co., Ltd., Pakenham.	5 "	7	Vendors.		Shorts.. ....



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

J. A. RICKEY, INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	...	4.14	...	14.08	12.1	Oat hulls, no seeds ...	43258	Genuine.
..	.....	.....	4.60	.....	14.31	8.6	As claimed, no seeds..	43259	"
.....	.....	.....	4.62	.....	13.39	9.3	" ..	43260	"
.....	.....	.....	4.24	.....	15.35	9.2	" ..	43261	"
6.02	18.38	7.99	5.14	.....	17.69	5.8	" ..	43263	"
.....	.....	.....	5.12	.....	15.66	6.6	" ..	43265	"
.....	.....	.....	4.30	.....	13.78	10.3	" ..	43266	Pass.
.....	.....	...	4.02	.....	16.45	4.6	" ..	43268	Genuine.
..	.....	.....	4.08	.....	15.14	5.8	As claimed, no weed seeds.	43269	"
.....	.....	...	3.90	.....	12.29	6.2	" ..	43270	Low in proteids. Adulterated under the Act.
.....	..	.....	.....	2.08	12.51	0.8	Much starch, no weed seeds.	43271	Low in fat. & proteids. Should be sold as feed flour.
.....	.....	.....	2.32	.....	12.20	4.2	As claimed, no weed seeds.	43274	Genuine.
.....	.....	.....	2.74	.....	9.36	8.8	As claimed, no seeds; oat hulls.	43275	"
.....	.....	.....	4.18	.....	13.43	5.9	As claimed, no seeds..	43276	"
..	.....	.....	3.56	.....	10.15	8.6	" ..	43280	"
.....	.....	.....	.....	2.32	13.26	1.3	Floury, no seeds.....	43281	Low in fat. and proteids. Should be sold as feed flour.
.....	.....	.....	4.00	...	14.31	8.1	As claimed, no seeds..	43284	Genuine.
.....	.....	.....	5.06	.....	15.53	6.3	" ..	43285	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911.								
May	4	Stock Feeds.	43286 The Dowd Mil- ling Co., Ltd., Quyon, P.Q.	5 lbs.	7	Vendors		Shorts. . . . .
"	9	"	43288 The Woods Mills Co., Smith Falls.	5 "	Nil	"		Chop Feed (Oats & Corn).
"	12	"	43293 J.W. McKay, 347 Wellington st., Ottawa.	5 "	12	The Quaker Manu- Oats Co., facturers. Peterboro, Ont.		Chop Feed, "Ban- ner" Brand, analy- sis on Bags, Reg. No.16. <i>Protein</i> 8.50. <i>Fat</i> 3.50, <i>Fibre</i> 1.00
"	12	"	43294 " 5 "	5 "	13			Chop Feed. "Schu- macher" Brand Reg. No. 13 analy- sis on bags. <i>Protein</i> 10.50, <i>Fat</i> 4.00 <i>Fib.</i> 10.50.
"	4	"	43295 The Dowd Mil- ling Co., Quyon P.Q.	5 "	Nil	Vendors.		Oat Feed. . . . .

DISTRICT OF KINGSTON—

April	27	Stocks Feeds.	48501 J.A. McFarlane, Kingston.	5 lbs.	5	Canada Cereal Co., Toronto		Bran.. . . .
"	27	"	48502 W. P. Peters, Kingston.	5 "	10	Lake of the Woods Mil- ling Co.		
"	27	"	48503 D. Hutchison, Kingston.	5 "	10	Ogilvie Milling Co.		
May	1	"	48504 A. H. Lake, Pictou, Ont.	5 "	5	Vendor.....		
"	1	"	48505 Hyatt & Rolston, Pictou, Ont.	5 "	5	Vendors .....		
April	27	"	48506 Hedley Shaw, Kingston.	5 "	10	Vendor. . . . .		Shorts . . . . .
"	27	"	48507 W. P. Peters, Kingston.	5 "	5	Quaker Oats Co., Peter- boro.		" . . . . .
"	27	"	48508 J. A. McFarlane, Kingston.	5 "	10	Canada Cereal Co., Toronto.		
"	27	"	48509 D. Hutchison, Kingston.	5 "	10	Seaforth Mil- ling Co.		
"	28	"	48510 Geo. Gibson, Kingston.	5 "	10	Hedley Shaw Milling Co.		
"	27	"	48511 Kingston Milling Co., Kingston.	5 "	10	Vendors .....		Middlings.....
"	28	"	48512 Geo. Gibson, Kingston.	5 "	10	Leitch Bros., Winnipeg.		
May	2	"	48513 H. E. Mayhew, (Trent Valley Mills) Trenton	5 "	5	Vendor.. . . .		
"	2	"	48514 E. A. Duncan, Cobourg.	5 "	20	Lake of the Woods.		



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

J. A. RICKEY, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	4.16	.....	15.40	7.8	As claimed, no seeds..	43286	Genuine,
.....	.....	.....	3.74	.....	10.24	7.4	" ..	43288	"
3.50	8.50	9.00	2.28	.....	9.77	6.2	" ..	43293	"
4.00	10.50	10.50	2.32	.....	9.06	9.2	" ..	43294	"
.....	.....	.....	.....	3.33	10.84	18.6	" ..	43295	Excess hulls. Adulterated.

JAS. HOGAN, INSPECTOR.

.....	.....	.....	.....	3.68	14.10	9.8	As claimed, no seeds..	48501	Genuine.
.....	.....	.....	4.10	.....	15.62	9.6	" ..	48502	"
.....	.....	.....	4.34	.....	15.75	7.8	" ..	48503	"
.....	.....	.....	4.64	.....	15.71	7.1	" ..	48504	"
.....	.....	.....	4.16	.....	15.92	8.5	" ..	48505	"
.....	.....	.....	5.24	.....	16.32	6.9	As claimed, no weed seeds.	48506	"
.....	.....	.....	4.34	.....	14.52	7.0	" ..	48507	"
.....	.....	.....	.....	4.02	15.35	6.5	" ..	48508	"
.....	.....	.....	.....	4.02	15.40	7.4	" ..	48509	"
.....	.....	.....	5.32	.....	16.27	8.0	Bran tissues, no weed seeds.	48510	"
.....	.....	.....	3.76	.....	14.48	2.7	" ..	48511	"
.....	.....	.....	4.64	.....	14.61	1.5	Floury, no weed seeds..	48512	"
.....	.....	.....	5.06	.....	15.01	6.4	" ..	48513	"
.....	.....	.....	.....	3.24	14.83	5.2	As claimed, no weed seeds.	48514	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF KINGSTON—

1911.								
May 2	Stocks Feeds.	48515	Thompson & Macdonald, Cobourg.	5 lbs..	5	Ogilvie's, Montreal.		Middlings. ....
April 27		48516	Kingston Milling Co., Kingston.	5 "	10	Vendors .....		Chop Feed .....
" 27		48517	W. P. Peters, Kingston.	5 "	10	Quaker Oats Co., Peterboro.		" .....
" 27		48518	D. Hutchison, Kingston.	5 "	10	Vendor. ....		" .....
" 28		48519	Geo. Gibson, Kingston.	5 "	10	Quaker Oats Co., Peterboro.		" .....
May 1		48520	A. H. Lake, Picton, Ont.	5 "	5	Vendor....		" .....

DISTRICT OF TORONTO—

May 12	Stock Feed.	47323	O. E. Wilson, Dunnville.	5 lbs..	5	Vendor..		Chop Feed..... (Mixed Grains.)
" 12		47324	S. Haney & Son, Dunnville.	5 "	5	Vendors		Chop Feed.....
" 15		47325	Chisholm Milling Co., Ltd., Toronto.	5 "	5	"		" .....
" 16		47326	Joseph White, 682 Queen St., East, Toronto.	5 "	5	Vendor..		(Monarch Brand, Reg. No. 85.) Chop Feed..... (Sample from a bin in feed store with Bran and Oat Shorts mixed together and sold as mixed feed. Not Reg.)
" 16		47327	The C. J. Daniels Milling Co., Ltd., Toronto.	5 "	10		McGowan Milling Co., Durham.	Chop Feed..... (Barley and oats. No Reg. No. on bags.)
" 9		47328	The Maple Leaf Milling Co., Ltd., Thorold.	5 "	6	Vendors		Bran.....
" 13		47329	Wood Milling Co., Hamilton.	5 "	5	"		" .....
" 13		47330	Jos. Dunlap Co., Ltd., Hamilton	5 "	7	Maple Leaf Milling Co., Kenora.		" .....
" 15		47331	Western Canada Flour Mills Co., Ltd., Toronto.	5 "	5	Vendors		" .....
" 16		47332	The Campbell Milling Co., Ltd., West Toronto.	5 "	Nil.	"		(Registration No. 66) Bran .....
" 9		47333	The Maple Leaf Milling Co., Ltd., St. Catharines.	5 "	10	"		Shorts.....



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

JAS. HOGAN, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
.....	.....	.....	4.28	.....	16.89	6.2	As claimed, no weed seeds.	48515	Genuine.
.....	.....	.....	3.92	.....	9.27	8.8	.....	48516	"
.....	.....	.....	2.56	.....	10.06	10.3	Oats hulls, no weed seeds.	48517	"
.....	.....	.....	2.60	.....	9.36	11.4	As claimed, no weed seeds.	48518	"
.....	.....	.....	2.36	.....	9.20	6.9	"	48519	"
.....	.....	.....	3.26	.....	10.06	10.3	As claimed, no seeds.	48520	"

H. J. DAGER, INSPECTOR.

.....	.....	.....	2.30	.....	10.81	3.9	As claimed, no weed seeds.	47323	Genuine.
.....	.....	.....	2.04	.....	17.19	7.1	"	47324	"
3.00	7.00	25.00	2.40	.....	6.00	20.6	Excess hulls, no weed seeds.	47325	Low in proteids, high fibre but nearly meets claim Pass.
.....	.....	.....	5.40	.....	15.57	4.6	As claimed, no weed seeds.	47326	Genuine.
2.08	6.90 Reg 87	23.78	.....	1.62	7.70	14.1	Hulls in excess. No weed seeds.	47327	Meets guarantee. Pass.
.....	.....	.....	4.82	.....	15.66	7.6	As claimed. No weed seeds.	47328	Genuine.
.....	.....	.....	3.40	.....	13.82	8.4	"	47329	"
.....	.....	.....	4.48	.....	14.35	9.2	"	47330	"
5.50	16.82	10.86	3.72	.....	15.76	9.6	"	47331	Genuine as bran ; but below claim in fat. Pass.
.....	.....	.....	3.86	.....	14.52	9.7	"	47332	Genuine.
.....	.....	.....	.....	5.25	17.63	6.2	"	47333	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cost.	Manufacturer.	Furnisher.	

DISTRICT OF TORONTO—

1911.								
May 13	Stocks Feeds.	47334	Hamilton Milling Co., Hamilton.	5 lbs..	6	Vendors .....		Shorts.....
" 13	" ..	47335	Kerr Milling Co., Ltd., Dundas.	5 " ..	5	" .....		" .....
" 11	" ..	47336	Lake of the Woods Milling Co., Ltd., Toronto.	5 " ..	5	" .....		" .....
" 16	" ..	47337	The Chalmers Milling Co., East Toronto.	5 " ..	7	" .....		" .....
" 9	" ..	47338	J. Black & Son, St. Catharines.	5 " ..	10	" .....		Middlings .....
" 9	" ..	47339	Wm. Monroe, Thorold.	5 " ..	10	Vendor.. ..		" .....
" 11	" ..	47340	Riverside Mills, Welland.	5 " ..	10	Vendors .....		" .....
" 15	" ..	47341	The Alex. Brown Milling Co., Ltd., Toronto.	5 " ..	5	" .....		" .....
" 19	" ..	47342	Wm. Cosburn, 323 Queen St., East Toronto.	5 " ..	7	..... Lake of the Woods Milling Co., Ltd.		" (Bags are branded Shorts, but sold as Middlings.)

DISTRICT OF LONDON--

May 16	Stock Feed .	48057	Jno. A. Andrew, Stratford.	5 lbs..	10	McLeod Milling Co., Stratford.		Shorts.....
" 16	" ..	48058	" ..	5 " ..	10	" ..		Bran.....
" 16	" ..	48059	" ..	5 " ..	10	Unknown. ....	Unknown...	Chop Feed.....
" 16	" ..	48060	O. H. Killer, Stratford.	5 " ..	8	McLeod Milling Co., Stratford.		Shorts.....
" 16	" ..	48061	" ..	5 " ..	8	" ..		Bran.....
" 16	" ..	48062	" ..	3 pkgs	9	Quaker Oats Co., Peterboro.		Chop Feed (Schumacher).
" 16	" ..	48065	J. Kennedy, Berlin.	3 " ..	8	Irvine Master City Mills, Berlin.		Shorts ...
" 16	" ..	48066	" ..	3 " ..	8	" ..		Bran....
" 17	" ..	48067	J. Weseloh, Waterloo, Ont.	3 " ..	10	Wm. Snyder, Waterloo, Ont.		Shorts...
" 17	" ..	48068	" ..	3 " ..	10	" ..		Chop Feed.....
" 17	" ..	48069	I. Holman, Berlin.	3 " ..	8	Unknown. ....		Shorts.....
" 17	" ..	48070	" ..	3 " ..	8	Vendor....		Bran.....
" 17	" ..	48071	" ..	3 " ..	8	" ..		Chop Feed.....
" 17	" ..	48072	Struthers and Church, Galt, Ont.	3 " ..	10	Vendors.....		" .....



## SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

H. J. DAGER, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
.....	.....	.....	.....	3.86	15.01	4.7	As claimed, no weed seeds.	47334	Genuine.
.....	.....	.....	.....	4.97	15.18	7.8	" ..	47335	"
.....	.....	.....	5.20	.....	16.76	5.6	" ..	47336	"
.....	.....	.....	.....	5.50	16.40	4.9	" ..	47337	"
.....	.....	.....	.....	5.44	15.35	5.3	" ..	47338	"
.....	.....	.....	4.26	.....	15.22	1.4	" ..	47339	"
.....	.....	.....	.....	5.11	16.27	6.5	" ..	47340	"
.....	.....	.....	4.96	.....	14.40	6.6	" ..	47341	"
.....	.....	.....	4.60	.....	17.02	5.2	" ..	47342	"

JNO. TALBOT, ACTING INSPECTOR.

.....	.....	.....	.....	4.46	15.71	6.2	As claimed, no weed seeds.	48057	Genuine.
.....	.....	.....	4.19	.....	13.82	9.4	As claimed, no seeds..	48058	"
.....	.....	.....	.....	2.30	10.72	5.5	" ..	48059	"
.....	.....	.....	.....	4.43	11.70	5.4	" ..	48060	"
.....	.....	.....	4.25	.....	15.44	8.8	" ..	48061	"
4	10.50	10.50	.....	2.90	10.63	9.4	" ..	48062	"
.....	.....	.....	.....	4.10	15.71	4.3	As claimed, no weed seeds.	48065	"
.....	.....	.....	4.23	.....	14.87	8.8	" ..	48066	"
.....	.....	.....	4.44	.....	14.57	6.2	As claimed, no weed seeds, bran.	48067	"
.....	.....	.....	4.14	.....	11.59	10.0	" ..	48068	"
.....	.....	.....	4.14	.....	14.70	7.4	" ..	48069	"
.....	.....	.....	4.57	.....	15.84	8.6	" ..	48070	"
.....	.....	.....	3.52	.....	10.10	9.6	" ..	48071	"
.....	.....	.....	4.36	.....	11.29	8.2	" ..	48072	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF WINDSOR—

1911.								
May	11	Stock Feeds.	48035 Hueston & Son, Glencoe.	5 lbs.	10		Woodburn Short's Milling Co., Glencoe.	
"	12	"	48037 Geo. Kirk, Woodstock, Ont.	5 "	5	Ogilvie Milling Co., Winni-		
"	12	"	48038	5 "	5			Bran.....
"	12	"	48039	5 "	5		Grain sent to mill by the vendor and chopped to his order.	Chop Feed.....
"	12	"	48040 A. Patrick, Woodstock, Ont.	5 "	9	Unknown.....		Shorts.....
"	12	"	48041	5 "	9		Unknown ..	Bran.....
"	12	"	48042	5 "	9			Chop Feed.....
"	12	"	48043	5 "	9	Bartlett Co., Jackson, Michigan,		Cotton Seed Meal, "Michigan Farmer's Brand". Reg. No. 97.
"	10	"	48044 Geo. H. Murray, Woodstock, Ont.	5 "	5	Ogilvie Milling Co., Winni-		Bran.....
"	12	"	48045	5 "	5	Jas. Cullen, Woodstock, Ont.		Shorts.....
"	12	"	48046	5 "	5	M. Archibald Co., Beachville, Ont.		Chop Feed.....
"	13	"	48048 B. L. Scott, Ingersoll.	5 "	5	Tavistock Milling Co., Tavistock.		Shorts.....
"	13	"	48050	5 "	5	Western Canada Milling Co.		Bran.....
"	13	"	48051	5 "	5	Vendor..		Chop Feed.....

DISTRICT OF MANITOBA—

May	4	"	47401 Western Canada Flour Mills Co., St. Boniface.	5 lbs.	Nil.	Vendors ..		Bran.....
"	5	"	47402 The Ogilvie Flour Mills Co., Ltd., Winnipeg.	5 "				".....
"	17	"	47403 Lake of the Woods Milling Co., Portage la Prairie.	6 "				".....
	17	"	47404 Maple Leaf Flour Mills Co., Brandon.	6 "				".....



## SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

## JNO. TALBOT, INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	.....	4.22	14.04	6.8	As claimed, no seeds	48035	Genuine.
.....	.....	.....	.....	4.39	15.40	7.0	As claimed, no weed seeds.	48037	"
.....	.....	.....	4.27	.....	15.14	8.2	"	48038	"
.....	.....	.....	3.36	.....	12.03	10.1	"	48039	"
.....	.....	.....	.....	3.73	15.12	6.8	As claimed, no weed seeds, bran tissues.	48040	"
.....	.....	.....	4.51	.....	16.32	8.5	"	48041	"
.....	.....	.....	3.22	.....	7.78	10.8	Oathulls, no weed seeds	48042	Proteids low pass.
7	38	13	7.84	.....	39.77	6.2	As claimed, no weed seeds.	48043	Genuine.
.....	.....	.....	4.13	.....	13.65	8.2	As described, no seeds	48044	"
.....	.....	.....	.....	3.61	15.10	6.9	As described, no weed seed.	48045	"
.....	.....	.....	.....	4.48	11.55	7.6	"	48046	"
.....	.....	.....	.....	4.16	14.00	7.0	As claimed, no weed seeds.	48048	"
.....	.....	.....	4.63	.....	15.88	7.8	"	48050	"
.....	.....	.....	.....	3.18	10.25	1.6	Corn chop, no seeds....	48051	"

## A. C. LARIVIÈRE, INSPECTOR.

.....	.....	.....	4.39	.....	14.31	9.5	As claimed, no seeds..	47401	Genuine
.....	.....	.....	4.53	.....	14.48	10.5	"	47402	"
.....	.....	.....	4.57	.....	14.87	9.9	"	47403	"
.....	.....	.....	4.49	.....	15.88	9.0	"	47404	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cent.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1911.								
May	18	Stocks Feeds.	47405	The Western Canada Flour Mills, Co., Ltd., Brandon.	6 lbs.	Nil.	Vendors . . . . .	Bran. . . . .
"	4	"	47406	The West'n Canada Flour Mills Co., Ltd., St. Boniface.	5 "	"	"	Shorts. . . . .
"	5	"	47407	The Ogilvie Flour Mills Co., Ltd., Winnipeg.	5 "	"	"	"
"	17	"	47408	Lake of the Woods Milling Co., Portage la Prairie.	6 "	"	"	"
"	17	"	47409	Maple Flour Mills Co., Brandon.	6 "	"	"	"
"	18	"	47410	The West'n Canada Flour Mills Co. Ltd., Brandon.	6 "	"	"	"
"	4	"	47411	The West'n Canada Flour Mills Co., Ltd., St. Boniface.	5 "	"	"	Middling. . . . .
"	5	"	47412	The Ogilvie Flour Mills Co., Ltd., Winnipeg.	5 "	"	"	"
"	18	"	47413	The West'n Canada Flour Mills Co. Ltd., Brandon.	6 "	"	"	"
"	19	"	47414	Laing Bros., Winnipeg.	6 "	"	Doukabor Society, Verigin, Sask.	"
"	19	"	47415	Carnefac Stock Food Co., Winnipeg.	6 "	"	The Western Canada Flour Mills Co., St. Boniface.	"
"	4	"	47416	Western Canada Flour Mills Co., Ltd., St. Boniface.	5 "	"	Vendors . . . . .	Chop Feed. . . . .
"	5	"	47417	The Ogilvie Flour Mills Co., Winnipeg.	5 "	"	"	"



## SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analyses.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

A. C. LARIVIERE, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
...	...	...	4.73	...	17.63	7.7	As claimed, no seeds..	47405	Genuine.
.....	.....	.....	5.76	.....	16.58	6.2	As claimed, no weed seeds.	47406	"
.....	.....	.....	5.14	.....	16.67	6.4	" ..	47407	"
.....	.....	.....	5.30	.....	17.15	5.5	" ..	47408	"
.....	.....	.....	5.74	...	16.32	6.0	" ..	47409	"
.....	.....	.....	4.58	.....	16.10	6.4	" ..	47410	"
.....	.....	.....	3.98	.....	15.18	3.3	" ..	47411	"
.....	.....	.....	4.44	.....	14.48	6.6	" ..	47412	"
.....	.....	.....	.....	2.66	15.11	1.9	Chiefly flour, no weed seeds.	47413	Low in fat. Should be sold as feed flour.
.....	.....	.....	.....	3.16	13.60	1.8	" ..	47414	Low in proteids. Should be sold as feed flour.
.....	.....	.....	4.28	.....	14.52	4.9	As claimed, no weed seed.	47415	Genuine.
.....	.....	.....	3.58	.....	14.35	5.2	" ..	47416	"
.....	.....	.....	4.48	.....	14.48	3.7	" ..	47417	"



Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911.								
May 18	Stock Feeds	43849	J. E. Love, Calgary.	5 lbs.	20	Saskatchewan Flour Mills Co., Ltd., Moosejaw.		Bran .....
" 18	"	43850	Erb & Anderson, Calgary.	5 "	20			" .....
" 19	"	43851	T. Fletcher, Calgary.	5 "	20	Western Canada Flour Mills, Winnipeg.		" .....
" 19	"	43852	Western Milling Co., Ltd., Calgary.	5 "	20	Vendors .....		" .....
" 19	"	43853	J. H. Maguire, Calgary.	5 "	20	Western Milling Co., Ltd. Calgary.		" .....
" 18	"	43854	Erb & Anderson, Calgary.	5 "	20	Medicine Hat Milling Co., Medicine Hat.		Shorts .....
" 19	"	43855	T. Fletcher, Calgary.	5 "	20	Western Canada Flour Mills Co., Winnipeg.		" .....
" 19	"	43856	Western Milling Co., Ltd., Calgary.	5 "	20	Vendors .....		" .....
" 20	"	43857	Crown Feed and Produce Co., Calgary.	5 "	20	Redcliff Mill & Elevator Co., Redcliff.		" .....
" 20	"	43858	"	5 "	20			" .....
" 18	"	43859	J. E. Love, Calgary.	5 "	20	Brackman-Ker Milling Co., Ltd., Calgary		Chop Feed .....
" 18	"	43860	Erb & Anderson, Calgary.	5 "	20	Calgary Milling Co., Ltd. Calgary.		" .....
" 19	"	43862	Western Milling Co., Ltd., Calgary.	5 "	20	Vendors .....		" .....
" 20	"	43863	Crown Feed and Produce Co., Calgary.	5 "	20	"		" .....
" 18	"	43864	J. E. Love, Calgary.	5 "	20	Saskatchewan Flour Mills Co., Ltd., Moosejaw.		Middling .....
" 19	"	43865	T. Fletcher, Calgary.	5 "	20	"		" .....
" 20	"	43866	Calgary Milling Co. Ltd., Calgary.	5 "	20	Vendors .....		" .....



SESSIONAL PAPER No. 14  
STOCK FEED.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

R. W. FLETCHER, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
.....	.....	.....	4.76	.....	16.36	11.0	As described, no weeds.	43849	Genuine.
.....	.....	.....	4.54	....	16.19	6.8	" no seeds.	43850	"
.....	.....	.....	4.40	.....	15.66	8.2	" ..	43851	"
.....	.....	.....	4.56	....	14.83	7.9	" ..	43852	"
.....	.....	.....	4.32	...	13.96	8.0	" ..	43853	"
.....	.....	.....	4.12	.....	16.63	4.4	As claimed, no weed seeds.	43854	"
.....	.....	.....	4.78	.....	17.06	6.5	" ..	43855	"
.....	.....	.....		3.89	14.57	5.3	" ..	43856	"
.....	.....	.....	5.22	...	17.19	4.9	" ..	43857	"
.....	.....	.....	5.08	.....	17.91	5.6	" ..	43858	"
.....	.....	.....		1.27	5.60	28.0	Excess hulls, no weed seeds.	43859	Low in fat and in proteids. High in fibre. Adulterated.
.....	.....	.....	3.48	.....	10.68	10.3	As claimed, no weeds.	43860	Genuine.
.....	.....	.....	3.60	....	10.89	8.0	" ..	43862	"
.....	.....	.....	3.50	.....	9.92	9.3	" no weeds, oat hulls.	43863	"
.....	.....	.....	4.56	.....	17.59	4.8	As claimed, no weed seeds.	43864	"
.....	.....	.....	5.34	.....	17.54	5.0	" ..	43865	"
.....	.....	.....		3.40	15.20	1.8	" ..	43866	"



Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911.								
May 23	Stocks Feeds.	43867	Calgary Milling Co. Ltd., Calgary.	5 lbs..	20	Saskatchewan Flour Mills Co., Ltd., Moose Jaw.		Middling.....
23	"	43868	Lea & Duyei, 1209 Victoria Ave., Hillhurst, Calgary.	5 "	20			
23	"	43869	Calgary Milling Co., Ltd., Calgary.	5 "	20	Vendors.		Chop Feed...

DISTRICT OF NELSON—

May 18	Stock Feed.	48410	Taylor Milling & E. Co., Nelson, B.C.	5 lbs	10	Maple Leaf Milling Co., Kenora.		Bran ...
" 3	"	48411	"	5 "	10	Western Canada Milling Co. Winnipeg		Shorts.....
" 3	"	48412	"	5 "	10	Saskatchewan Milling Co., Moose Jaw.		Middlings .....
" 3	"	48413	"	5 "	10	Taylor Milling Co., Lethbridge.		Chop Feed..... Mixed.....
" 3	"	48414	Brackman-Ker M. Co., Nelson, B.C.	5 "	9	Saskatchewan F. M. Co., Moose Jaw.		Middlings.....
" 3	"	48415	"	5 "	9	Calgary M. Co., Calgary.		" .....
" 3	"	48416	"	5 "	9	"		Shorts.....
" 3	"	48417	"	5 "	9	"		Bran.....
" 3	"	48418	"	5 "	9	Lake of the Woods Milling Co., Portage La Prairie.		" .....
" 15	"	48421	Taylor Milling & E. Co., Cranbrook.	5 "	15	Taylor Milling & E. Co., Lethbridge.		" .....
" 15	"	48422	"	5 "	15	"		Shorts .....
" 15	"	48423	"	5 "	15	"		Chop Feed..... Mixed.....
" 15	"	48424	Cranbrook Trading Co., Cranbrook.	5 "	10	Saskatchewan F. M. Co., Moose Jaw.		Bran.....
" 15	"	48425	"	5 "	10	"		Shorts.....
" 15	"	48426	"	5 "	10	Alberta Pacific E. Co., Calgary.		Chop Feed..... Mixed.....



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids	Crude Fibre.			
			Indirect.	Direct.					

R. W. FLETCHER, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
.....	.....	.....	3.96	.....	17.46	5.8	As claimed, no weed seeds.	43867	Genuine.
.....	.....	.....	4.90	.....	17.81	5.8	"	43868	"
.....	.....	.....	3.74	.....	11.55	7.6	"	43869	"

THOS. PARKER, INSPECTOR.

.....	.....	.....	4.28	14.61	9.4	As claimed, no weed seeds.	48410	Genuine.
.....	.....	.....	4.72	17.89	5.4	"	49411	"
.....	.....	.....	4.70	18.02	5.5	"	48412	"
.....	.....	.....	2.80	11.51	7.9	"	48413	"
.....	.....	.....	6.06	17.76	5.1	As described, no weeds seeds.	48414	"
.....	.....	.....	3.32	14.83	1.4	Chiefly flour, no weed seeds.	48415	"
.....	.....	.....	5.46	16.45	5.9	As claimed, no weed seeds.	48416	"
.....	.....	.....	4.01	14.57	9.1	"	48417	"
.....	.....	.....	4.42	14.92	8.8	Weed seeds.....	48418	Adulterated with weed seeds, 160 seeds per lb.
.....	.....	.....	3.74	16.80	9.1	As claimed, no seeds..	48421	Genuine.
.....	.....	.....	4.60	16.67	4.6	"	48422	"
.....	.....	.....	3.64	10.59	9.3	No weeds, oat hulls..	48423	"
.....	.....	.....	3.28	14.96	8.1	As claimed, no seeds..	48424	"
.....	.....	.....	4.42	15.15	4.4	"	48425	"
.....	.....	.....	2.92	7.05	21.6	Oat-hulls in excess....	48426	Proteids too low. Fibre too high adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF VANCOUVER—								
1911.								
May 15	Stock Feed.	38175	Henry Holtz, Granville St., Vancouver.	5 lbs.	10	Vancouver M. Co.		Bran. ....
" 16	"	38176	Brackman-Ker Milling Co., Vancouver.	5 "	Nil.	Ogilvie Milling Co.		" .....
" 22	"	38177	Calgary Milling Co., Vancouver			Vendors		" .....
" 22	"	38178	Vancouver Milling Co., Vancouver.	5 "				" .....
" 22	"	38170	McLellan McCarter, Vancouver.	5 "	10	Vancouver M. Co.		" .....
" 15	"	38180	Henry Holtz, Vancouver.	5 "	10			Shorts. ....
" 16	"	38181	Brackman-Ker Milling Co., Vancouver.	5 "	Nil.	Ogilvie Milling Co.		" .....
" 22	"	38182	Calgary Milling Co., Vancouver.	5 "		Vendors		Shorts. ....
" 22	"	38183	Vancouver Milling Co., Vancouver.	5 "		Tacoma Grain Co., Tacoma, Wash.		" .....
" 22	"	38184	McLellan & McCarter, Vancouver.	5 "	10	Vancouver Milling Co.		" .....
" 16	"	38185	Brackman-Ker Milling Co., Vancouver.	5 "	Nil.	Ogilvie Milling Co.		Middlings. ....
" 22	"	38186	Calgary Milling Co., Vancouver.	5 "		Vendors		" .....
" 22	"	38187	Vancouver Milling Co., Vancouver.	5 "				" .....
" 22	"	38188	McLellan & McCarter, Vancouver.	5 "	15	Vancouver Milling Co.		" .....
" 23	"	38189	W. H. Walsh, Vancouver.	5 "	15	Brackman-Ker Milling Co.		" .....
" 15	"	38190	Henry Holtz & Co., Vancouver.	5 "	15	Unknown	Unknown	Chop Feed. ....
" 16	"	38191	Brackman-Ker Milling Co., Vancouver.	5 "	Nil.	Vendors		" .....
" 22	"	38192	Calgary Milling Co., Vancouver.	5 "				" .....
" 22	"	38193	Vancouver Milling Co., Vancouver.	5 "				" .....
" 22	"	38194	McLellan & McCarter, Vancouver.	5 "	10	Vancouver Milling Co., Vancouver.		" .....



SESSIONAL PAPER No. 14  
STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					

J. F. POWER, INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	3.15	15.14	10.2	As claimed, no seeds..	38175	Genuine.	
.....	.....	.....	4.49	14.31	10.5	"	38176	"	
.....	.....	.....	3.82	13.47	9.4	"	38177	"	
.....	.....	.....	4.43	15.40	8.7	"	38178	"	
.....	.....	.....	2.47	17.63	9.3	"	38179	"	
.....	.....	.....	3.86	16.54	6.9	As described, no weed seeds.	38180	"	
.....	.....	.....	4.00	17.46	6.8	"	38181	"	
.....	.....	.....	4.76	15.97	4.8	As claimed, no weed seeds.	38182	Genuine.	
.....	.....	.....	5.56	15.14	6.2	"	38183	"	
.....	.....	.....	5.41	17.32	7.8	"	38184	"	
.....	.....	.....	1.99	11.42	0.9	Chiefly flour, no weed seeds.	38185	Low in fat and in proteids. Should be sold as feed flour.	
.....	.....	.....	3.08	15.79	1.8	Much starch, no weed seeds.	38186	Genuine.	
.....	.....	.....	4.92	16.32	5.0	As claimed, no weed seeds.	38187	"	
.....	.....	.....	2.82	14.13	2.6	Chiefly flour, no weed seeds.	38188	"	
.....	.....	.....	1.81	12.03	0.5	"	38189	Low in fat and in proteids. Should be sold as feed flour	
.....	.....	.....	4.96	10.98	8.2	As claimed, no weed seeds.	38190	Genuine.	
.....	.....	.....	2.63	10.06	10.5	"	38191	"	
.....	.....	.....	3.10	11.59	6.3	"	38192	"	
.....	.....	.....	2.24	11.38	11.3	Excess hulls, no weed seeds.	38193	"	
.....	.....	.....	3.92	11.90	7.8	As claimed, no weed seeds.	38194	"	



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF VICTORIA—								
1911.								
June 9	Stock Feeds.	47610	The Brackman-Ker Milling Co., Ltd., Victoria, B.C.	5 lbs.	10	Ogilvie, F. M. Winnipeg.		Bran.....
" 9	"	47611	"	5 "	10	Saskatchewan F. Mills Co., Ltd., Moose Jaw		Middlings.....
" 9	"	47612	"	5 "	10	The Columbia F. Mills Co., Ltd., Enderby, B.C.		"
" 9	"	47613	"	5 "	10	Saskatchewan F. Mills Co., Ltd., Moose Jaw.		Shorts..... ("Robin Hood" Brand)
" 9	"	47714	"	5 "	10	The Columbia F. Mills Co., Ltd., Enderby, B.C.		"
" 9	"	47615	"	5 "	5	Vendors		Chop Feed..... (Dairy).
" 9	"	47616	"	5 "	10	"		Chop Feed..... (Dairy).
" 12	"	47617	Scott & Peden, Victoria, B.C.	5 "	7½	Ogilvie F. Mills, Winnipeg.		Chop Feed..... (Dairy).
" 12	"	47618	"	5 "	7½	Vancouver Milling & Grain Co., Vancouver.		Middlings.....
" 12	"	47619	Scott & Peden, Victoria, B.C.	5 "	7½	Ogilvie Flour Mills, Winnipeg.		Bran.....
" 12	"	47620	"	5 "	7½	Western Canada F. Mills Co., Ltd.		Shorts. (Reg. No. 63.)
" 14	"	47621	T. W. Horne, Victoria, B.C.	5 "	7½	Prince Albert Roller Mills, P. Alb., Sask.		Middlings.....
" 14	"	47622	"	5 "	7½	Vancouver Milling and Grain Co., Ltd.		Shorts.....
" 14	"	47623	"	5 "	7½	Lake of the Woods, Portage la Prairie		Bran.....
" 14	"	47624	"	5 "	7½	Vendor.		Chop Feed. (Alfalfa Dairy.)
" 19	"	47625	Sylvester Feed Co., Victoria, B.C.	5 "	10	Vendors		Chop Feed. (Creamery.)
" 19	"	47626	"	5 "	7½	Ogilvie Flour Mills, Winnipeg.		Bran.....
" 19	"	47627	"	5 "	7½	The Novelty Milling Co., Seattle, Wash		Shorts.....
" 26	"	47630	Simon Leiser & Co., Ltd., Victoria, B.C.	5 "	Nil.	Western Canada F. Mills Co., Ltd.		Bran. (Reg. No. 66.)



SESSIONAL PAPER No. 14

## STOCK FEEDS.

Claim.			Results of Analysis.				Microscopic Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Fat.	Proteids.	Crude Fibre.	Fat.		Proteids.	Crude Fibre.			
			Indirect.	Direct.					
D. O'SULLIVAN, INSPECTOR.									
p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
.....	.....	.....	4.06	.....	14.48	10.5	As claimed, no weed seeds.	47610	Genuine.
.....	.....	.....	.	2.37	14.61	1.1	Excess starch, no weeds	47611	Low in fat. Should be sold as feed flour.
.....	.....	.....	...	2.60	15.14	2.8	"	47612	Low in fat. Pass.
.....	.....	.....	4.72	.....	18.11	5.4	As claimed, no weed seeds.	47613	Genuine.
.....	.....	.....	4.24	.....	15.31	5.5	"	47614	"
.....	.....	.....	2.56	.....	7.52	18.8	Excess oat hulls, no seeds.	47615	Low in proteids, high in fibre. Adulterated.
.....	.....	.....	2.56	..	9.59	9.4	As claimed, no seeds ..	47616	Genuine.
.....	.....	.....	.....	1.59	4.51	27.0	Excess hulls, no seeds.	47617	Low in fat and proteids, high in fibre. Adulterated
.....	.....	.....	.....	1.98	13.04	0.8	Chiefly flour, no seeds.	47618	Low in fat and proteids. Should be sold as feed flour.
.....	.....	..	4.08	.....	16.45	9.9	As claimed, no weed seeds.	47619	Genuine.
6.02	18.38	7.99	4.48	.....	18.00	7.1	"	47620	"
.....	.....	.....	.....	2.28	13.71	1.0	Chiefly flour.....	47621	Low in fat and proteids; should be sold as feed flour.
.....	.....	.....	4.00	.....	17.46	7.0	As claimed, no weed seeds.	47622	Genuine.
.....	.....	.....	3.52	.....	14.04	10.3	"	47623	"
.....	.....	.....	3.60	.....	10.19	10.6	Excess hulls, no weed seeds.	47624	"
.....	.....	.....	3.64	.....	10.10	4.8	As claimed, no weed seeds.	47625	"
.....	.....	.....	4.12	...	14.57	11.3	"	47626	"
.....	.....	.....	...	3.44	18.46	6.8	"	47627	"
5.50	16.82	10.86	4.44	.....	15.53	10.0	"	47630	Genuine.



## APPENDIX H.

## BULLETIN No. 232—COCA-COLA (SYRUP).

OTTAWA, February 12, 1912.

W. J. GERALD, Esq.,

Deputy Minister of Inland Revenue.

SIR,—It has frequently been suspected that cocaine might be present, as such, in the beverage known as Coca-Cola, and representations to this effect have several times been made to this department. In consequence of these complaints I have more than once examined the article, as found in the local market; and on the 14th July, 1910, I reported to you the results of inspection as follows:—

‘I beg to refer to yours of the 15th April (L. 69721) on the subject of Coca-Cola; also to a further letter (L. 71528) dated 15th June, touching the same matter.

‘Since receipt of these letters I have had correspondence with various persons, with a view to getting, at first hand, information regarding analysis, &c., and would specially acknowledge the courtesy of W. C. Gordonsmith, City Editor of the *Witness*, Montreal.

‘The only definite information regarding the composition of Coca-Cola which I have been able to get, is as follows:—

‘*Dr. Charles A. Crampton*, chemist to the Internal Revenue, Washington:—

“The content of caffeine is about  $\frac{16}{100}$  of one per cent. The other constituents were cocaine in a small amount, and theobromine in a small amount.” (Quoted by Dr. H. W. Wiley, in a letter to Mr. Gordonsmith, dated 17th May, 1910.)

In the same letter Dr. Wiley says:—‘No report or other publication, setting forth the composition of this product (Coca-Cola) has been published by the department up to the present time.’

‘*Farmer’s Bulletin* 393, Department of Agriculture, Washington, issued April 29, 1910, gives, in very general terms, a popular presentation of the subject of Medicated Soft Drinks, but contains no analytical data.

‘*The Report of the Chemist* (Dr. H. W. Wiley), Department of Agriculture, Washington, for 1908, contains at page 28 the following statement: ‘Among 80 samples of soft drinks, a considerable number were free from cocaine; and when its presence was established, the amount varied from a trace to 0.05 grain to the ounce.’

‘*Document* 644, (Senate of U. S. A., 1908-9), at p. 372 gives a list of 39 kinds of so-called “Soft Drinks” sold in the United States, which were found to contain caffeine and extract of coca leaf. It is not stated that the alkaloid cocaine was found in any of these samples. Some are claimed to be prepared from a decocainized coca leaf, the refuse product discarded in the manufacture of cocaine.

‘The *Montreal Witness* of April 9, 1910, contains an article on Coca-Cola, in which the following statement occurs:—

‘Analysis revealed that in each glass of Coca-Cola there is from one to one and a half grains of caffeine, one four hundredth ( $\frac{1}{400}$ ) of a grain of cocaine, &c.” A large “glass” may be taken as containing about 14 fluid ounces, or nearly 400 cubic centimetres. On this basis, the above statements would mean that in Coca-Cola there is present 0.024 per cent of caffeine and 0.00004 per cent of cocaine (weight in volume.)



## SESSIONAL PAPER No. 14

I have caused four samples of Coca-Cola (purchased in Ottawa, and bottled in Montreal under the authority of the Coca-Cola Co., of Atlanta, Ga.), to be very carefully examined in this laboratory, for caffeine and cocaine. Working upon quantities of 200 cubic centimetres, the following percentages of caffeine were separated and identified. In three samples, 0.005 per cent; in one sample 0.0055 per cent weight in volume.

In none of these samples could cocaine be detected. By working upon samples to which cocaine, in known quantity, was intentionally added, it was found that the separation and identification of cocaine (in volumes 200 cc.) are not possible, when the quantity present is less than 0.0005 per cent, *i.e.*, one milligramme per 200 cubic centimetres. The certain detection of so small an amount as 0.00004 per cent of cocaine would therefore involve the use of at least 5 litres of the original sample. In the absence of certified statements, and description of the method of working, I am compelled to doubt the scientific value of work done under such conditions.

The minimum dose of cocaine (Hydrochloride) given in the British *Pharmacopœia* is ( $\frac{1}{6}$ ) one-sixth of a grain, and this may be assumed to be the least quantity which is physiologically active. The highest amount quoted by Dr. Wiley (Report 1908) as found in soft drinks is five one-hundredths (0.05) of a grain per ounce; which for a glass (14 oz.) would amount to a dosage of seven-tenths (0.7) grain. This is far in excess of safety, and might even be fatal. The amount ( $\frac{1}{400}$  grain per glass) quoted in Senate Document 644 is, as already stated, so small as to escape detection, by analytical methods, unless work is done upon volumes exceeding 5 litres. Whether such an amount could have any influence in forming the so-called 'cocaine habit,' I am unable to decide. It is certain that the physiological significance of this quantity must be infinitesimally small, if not actually *nil*.

It would therefore appear that the article, as sold in bottles, is either entirely free from cocaine, or contains so insignificant a trace of the alkaloid as to be negligible.

More recently it has been urged that, although practically absent from the beverage as sold in bottles, cocaine might be present in the syrup supplied to soda fountains.

In order to determine this point, 68 samples of such syrup were purchased, in different parts of Canada, in October and November last; and these have been subjected to analysis, with the result that no cocaine has been found in any of them. Caffeine has been found in all of them, in amount varying from 0.15 to 0.72 of a grain per ounce. The average amount is about 0.60 grain per ounce of the syrup. So far as I can learn, this is the usual amount of syrup employed in making a glass of the beverage. The pharmacopœal dose of caffeine is 1 to 5 grains; so that the quantity present in a glass of Coca-Cola, as supplied at fountains is well within the limit of safety.

I beg to recommend the publication of this report as Bulletin No. 232.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



BULLETIN No. 232—COCA COLA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (Is not an expression of opinion.)	RESULTS OF ANALYSIS		No. of Sample.
				Quantity.	Cents.			Cocaine.	Caffeine per ounce grains.	

DISTRICT OF NOVA SCOTIA R. J. WAUGH, INSPECTOR.

1911.								p. c.	p. c.	
Oct.	26 Coca Cola.	46735	Wm. Patrick, Halifax, N.S.	8 oz.	15	Unknown	N. D. & C. Co., Halifax, N.S.			46735
"	26 "	46736	A. H. Buckley, Halifax, N.S.	12 "	30	Coca Cola Co., Georgia, U.S.A.	"		0.69	46736
Nov.	9 "	46737	A. N. Mellickes, Halifax, N.S.	12 "	20	Unknown	"		0.56	46737
"	13 "	46738	C. A. Mumford, Halifax, N.S.	12 "	50	Coca Cola, Georgia, U.S.A.	"		0.61	46738
"	13 "	46739	T. M. Power, Halifax, N.S.	8 "	20	"	"		0.63	46739

DISTRICT OF PRINCE EDWARD ISLAND—WM. A. WEEKS, INSPECTOR.

Oct.	16 Coca Cola	46086	J. G. Jamieson, Charlottetown, P.E.I.	12 oz.	60	Home Office, Atlanta		None.	0.67	46086
"	16 "	46087	Johnson & Johnson, P.E.I.	12 "	60	Unknown		"	0.54	46087
"	26 "	46088	E. J. DesRoches, Charlottetown, P.E.I.	12 "	60		N. Rathenbury, Charlottetown, P.E.I.	"	0.63	46088



DISTRICT OF NEW BRUNSWICK—J. C. FERGUSON, INSPECTOR.

Oct.	13	Coca-Cola	45520	Wm. Hawker & Son, St. John, N.B.	12 oz.	30	Coca-Cola Co., Toronto, Ont.	.....	None	0.67	45520
"	21	"	45521	M. V. Paddock, St. John, N.B.	12 "	35	"	.....	"	0.43	45521
Nov.	3	"	45522	Checchi Bros., St. Stephen, N.B.	12 "	30	.....	Nat. Drug & Chem. Co., Ltd., St. John, N.B.	"	0.15	45522
"	7	"	45523	C. Fred. Chestnut, Fred. ericton, N.B.	12 "	60	Coca-Cola Co., Toronto, Ont.	.....	"	0.47	45523
"	15	"	45524	Wm. McMullen, Moncton, N.B.	12 "	30	Coca-Cola Co., Philadelphia and Chicago, U.S.	.....	"	0.56	45524

DISTRICT OF QUEBEC—F. N. W. E. BELAND, INSPECTOR.

Oct.	12	Coca-Cola	36978	New York Ice Cream Saloon, Quebec.	12 oz.	25	Coca-Cola, Toronto	.....	None	.....	.....
"	13	"	36979	Taury chesyreses, 74 Rue St. Jean, Quebec.	12 "	30	"	.....	"	0.60	36979

DISTRICT OF ST. HYACINTHE—J. C. ROULEAU, INSPECTOR.

Nov.	6	Coca-Cola	1159	Anastasos Bey Thetford Mines, P.Q.	1 pt.	40	The Coca-Cola Co., Toronto	.....	.....	.....	1159
"	9	"	1160	A. Ayoub, Sherbrooke.	1 "	40	.....	A. Shanngili, Sherbrooke.	None	0.50	1160
"	22	"	1161	M. Nicholson, Sorel	1 "	30	The Coca-Cola Co., Toronto.	.....	"	0.63	1161
"	23	"	1162	Fourniezos & Co., St. Hyacinthe.	1 "	40	"	.....	"	0.54	1162

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR.

Oct.	16	Coca-Cola	40901	S. Moisan, 661 St. Lawrence Blvd., Montreal.	1 lb.	25	Coca-Cola Co., Montreal.	.....	None	0.15	40901
"	16	"	40902	M. Nicholson, 481 St. Lawrence Blvd., Montreal.	"	45	"	.....	"	0.50	40902
"	16	"	40903	E. D. Howick, 63 St. Lawrence Blvd., Montreal.	"	30	.....	.....	"	0.56	40903



BULLETIN No. 232 COCA-COLA.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)	Results of Analysis		No. of Sample.
				Cost.	Quantity			Cocaine.	Caffeine per ounce grains.	
						Manufacturer.	Manufacturer.			

DISTRICT OF MONTREAL—J. J. COSTIGAN, INSPECTOR—Concluded.

1911.										
Oct. 16	Coca Cola	10904	Coca Cola Co., 591 St. Paul St., Montreal.	1 lb.	15	Vendors	This sample is ven- dors' second grade and is used in their product that is put up in small bottle.			10904
" 16	"	10905	"	"	15	"				10905

DISTRICT OF OTTAWA—J. A. RICEY, INSPECTOR.

Oct. 9	Coca Cola	19001	Estate W. H. Roger, 12 oz. Ottawa.	12 oz.	50	Coca Cola Co., Tor- onto.			0.60	19001
" 12	"	19002	W. F. Sparham, Amprior.	12 "	50	"			0.60	19002
" 21	"	19003	S. J. Ladas & Co., Sparks St., Ottawa.	12 "	50	"			0.52	19003
" 21	"	19004	Allen & Cochrane, Sparks St., Ottawa.	12 "	50	"			0.45	19004
" 24	"	19005	The Coca-Cola Co., Sparks St., Ottawa.	12 "	30	Vendors			0.56	19005



DISTRICT OF KINGSTON—JAS. HOGAN, INSPECTOR.

Nov.	2	Coca-Cola.....	48532	Geo. Mahood, Kingston.	12 oz.	40	N. C. Polson, Kings- ton.	.....	None	0.56	48532
"	3	"	48533	N. R. Grimm, Kingston.	12 "	30	A. J. Acleau, Tor- onto.	.....	"	0.64	48533
"	3	"	48534	M. P. Pappas & Co., Kings- ton.	12 "	30	Coca-Cola Co., Tor- onto.	.....	"	0.64	48534
"	3	"	48535	T. Sakells, Kingston.....	12 "	30	T. McMahon, Tor- onto.	.....	"	0.45	48535
"	3	"	48536	Geo. Masoud, Kingston	12 "	30	N. C. Polson, Kings- ton.	.....	"	0.69	48536

DISTRICT OF TORONTO—H. J. DAGER, INSPECTOR.

Oct.	16	Coca Cola.....	49310	The Hennessey Drug Stores Ltd., Hamilton.	7 lb.	25	Coca-Cola, Atlanta, N.S.	.....	None	0.56	49310
"	20	"	49311	F.H. Webb, 714 Queen St. East Toronto.	12 oz.	30	Coca-Cola, Co., To- ronto.	.....	"	0.54	49311
"	20	"	49312	Bruce & Hunt Co., Ltd., 466 Spadina Ave, Toronto	12 "	40	"	.....	"	0.43	49312
"	24	"	49313	Dumas Bros, Owen Sound	7 lb.	25	Unknown	.....	"	0.43	49313
Nov.	2	"	49314	D.M. Tod, Oshawa. ....	7 "	30	W. G. Patrick, To- ronto.	.....	"	0.52	49314

DISTRICT OF LONDON, JNO. TALBOT, INSPECTOR.

Oct.	23	Coca-Cola.....	47855	Fawkes & Son, London....	12 oz.	25	Coca-Cola, Co., To- ronto.	.....	None.....	0.52	47855
"	23	"	47856	E. Boomer, London.....	12 "	20	"	.....	"	0.50	47856
"	23	"	47857	Geo. Peters, London ....	12 "	20	"	.....	"	0.56	47857
"	23	"	47858	R. Willis & Son, London, East.	12 "	25	"	.....	"	0.72	47858

DISTRICT OF MANITOBA, A. C., LARIVIÈRE, INSPECTOR.

Nov.	13	Coca-Cola.....	47474	Julius Bros, Winnipeg....	12 oz.	15	The Coca-Cola, Co., Toronto.	.....	None	0.47	47474
"	13	"	47475	Andrews Drug Store, Win- nipeg.	12 "	50	"	.....	"	0.67	47475
"	13	"	47476	The Gordon Mitchell Drug Co., Winnipeg.	12 "	15	.....	Solds as, Gay-ola	"	0.72	47476
"	13	"	47477	Olympia Restaurant, Win- nipeg.	12 "	20	Unknown	.....	"	0.52	47477
"	13	"	47478	Alberta Café, Winnipeg.	12 "	35	"	.....	"	0.52	47478



BULLETIN No. 232—COCA-COLA.

Date of Collection	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	(Inspector's Report is not an expression of opinion).	RESULTS OF ANALYSIS		No. of Sample.
				Quantity.	Cents.			Cocaine.	Caffeine per ounce grains.	

DISTRICT OF CALGARY, R. W. FLETCHER, INSPECTOR.

1911.										
Nov. 8	Coca-Cola	44001	Cameron Bros., Medicine Hat.	12 oz.	25	Coca-Cola Co., Atlanta, Georgia, U.S.		None	0 50	44001
" 8	"	44002	E. B. Lively, Medic. Hat.	12 "	25	"		"	0 52	44002
" 8	"	44003	F. B. McKinnon, Med. Hat.	12 "	25	"		"	0 63	44003
" 14	"	44004	J. Findlay Drug Co., Ltd., Calgary.	12 "	25	"		"	0 61	44004
" 14	"	44005	F. Rochon, Calgary.	12 "	25	"		"	0 56	44005

DISTRICT OF NELSON—THOS. PARKER, INSPECTOR.

1911.										
Oct. 19	Coca-Cola	48447	F. R. Waylitt Este, Fernie, B.C.	12 oz.	40	The Coca-Cola Co., Atlanta, U.S.		None	0 56	48447
" 19	"	48448	J. Wood, Fernie, B.C.	12 "	45	"		"	0 56	48448
" 27	"	48457	S. G. Hunt Este, Rossland.	12 "	45	"		"	0 63	48457
" 28	"	48483	C. H. Bean, Nelson, B.C.	12 "	45	"		"	0 52	48483
" 28	"	48485	Poole Drug Co., Nelson, B.C.	12 "	50	"		"	0 69	48485



SESSIONAL PAPER No. 14

DISTRICT OF VANCOUVER—J. F. POWER, INSPECTOR.

Oct. 17	Coca-Cola	38210	Harrison's Drug Store, Granville St., Vancouver	12 oz.	25	Healy Impt. Co., Vancouver.	None	0.56	38210
" 18	"	38211	Campbell Drug Co., Ltd., Granville St., Vancouver	12 "	45	Coca-Cola Co., Toronto.	"	0.59	38211
" 18	"	38212	C. V. Orme, 2031 Granville St., Vanc.	12 "	50	Kelly, Douglas, Vancouver.	"	0.72	38212
" 18	"	38213	A. Almond, Granville St., Vancouver.	12 "	50	Donnelly, Watson & Brown, Vancouver	"	0.52	38213
" 18	"	38214	C. A. Hardt, Woods Pharmacy, Vancouver.	12 "	25	Kelly, Douglas, Vancouver.	"	0.45	38214

DISTRICT OF VICTORIA—D. O'SULLIVAN, INSPECTOR.

Nov. 20	Coca-Cola	47676	H. A. Lilly, Victoria, B.C.	12 oz.	50	Kelly, Douglas Co., Vancouver.	None	0.72	47676
" 21	"	47677	U. Stramatares, Victoria, B.C.	12 "	50	Geo. Carter, Victoria, B.C.	"	0.60	47677
" 21	"	47678	A. Bancroft, Victoria, B.C.	12 "	50	Kelly, Douglas Co., Vancouver.	"	0.5	47678
" 22	"	47679	Harcop & Antipas, Victoria, B.C.	12 "	50	The Healy Imp. Co., Vancouver.	"	0.43	47679
" 22	"	47680	Ivils Pharmacy, Victoria, B.C.	12 "	50	Nat. Drug and Chem. Co., Victoria, B.C.	"	0.56	47680



APPENDIX I.

BULLETIN No. 233—MARMALADES.

CTTAWA, February 13, 1912.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you herewith a report upon 154 samples of marmalade, collected throughout Canada in April of last year. This report has been much delayed through the short-handedness of the staff of these laboratories; and the fact that more perishable articles had to be given priority.

Two samples were unfortunately destroyed by rats, whose ravages upon the labels were such as to make identification of the samples uncertain.

All samples, except nine, are orange marmalades.

One hundred and thirty-eight (138) samples are found to be genuine, in the sense that they consist of fruit and sugar. Fourteen (14) samples contain glucose, but in very varying amounts, as follows:—

	Samples.
Traces only. . . . .	2
About 2 per cent. . . . .	1
“ 3 “ . . . . .	3
“ 5 “ . . . . .	3
“ 10 “ . . . . .	2
“ 25 “ . . . . .	3
	14

Owing to the indefinite character of commercial glucose it is impossible to state the percentage admixture with exactitude. The numbers given above are calculated from work done upon a sample of glucose syrup, known to the trade as 43°

In sample 40615 (10 per cent) the presence of glucose is declared. Under modern methods of manufacture, glucose is a perfectly wholesome article of food. It consists mainly of dextrose (grape sugar) with varying quantities of dextrin (8 to 20 per cent. See Bulletin 96, p. 18). In ordinary processes of digestion, cane sugar (sucrose) is changed into glucose, and dextrin is produced by the action of ptyalin (the amylolytic enzyme of saliva) on starchy foods. Both glucose and dextrin are therefore nutritious foods, and are normally contained in every meal we eat, if not



## SESSIONAL PAPER No. 14

as such, yet as results of digestion of sugar and starch. There can be no sufficient reason, on the ground of wholesomeness for objecting to commercial glucose as a component of jam or marmalade.

Owing, however, to the fact that jams and marmalade were known long before glucose, it is right and proper to define jam and marmalade in conformity with accepted usage, as consisting of fruit and sugar only. If, as is claimed by many manufacturers, the addition of glucose actually improves the quality of jams and marmalades, there can be no reason for withholding a statement of the fact of its presence. The improved character of the article (if this is fact) should be sufficient justification for the introduction of the new ingredient.

In the meantime, it is necessary to describe jams which contain glucose without declaration of the fact, as adulterated under the Act, in that a cheaper substance than sugar has been in part substituted for sugar. (Sec. 3*b*). This is merely technical adulteration, and does not mean that, as an article of food, the jam or marmalade is less nutritious or wholesome.

I beg to recommend the publication of this report as Bulletin No. 233.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.

DISTRICT OF NOVA SCOTIA—

1911.										p. c.
April 19	Marmalade.	42286	Wm. Law & Co., Yarmouth, N.S.	3 jars.	45	Crosse & Blackwell, London, Eng.	Manufacturers.	.....		1.40
" 20	"	42287	Wentworth Stores, Ltd., Windsor, N.S.	3 "	60	Aylmer Canning Co., Aylmer, Ont.	R. B. Seeton & Co., Halifax, N.S.	.....		2.54
" 24	"	42290	Bauld Bros., Ltd., Halifax, N.S.	3 "	45	Chivers & Sons, Histon, Eng.	Manufacturers.	.....		1.50
" 24	"	42291	J. F. Crowe & Co., Ltd., Halifax, N.S.	3 "	38	J. Robertson & Sons, London, Eng.	"	.....		1.09
" 24	"	42292	Wentzells, Ltd., Halifax, N.S.	3 "	45	W. P. Hartley, London, Eng.	"	.....		1.35
" 24	"	42293	F. W. Hodgson, Halifax, N.S.	3 "	45	C. & E. Morton, London, Eng.	J. W. Goreham, Halifax, N.S.	.....		1.57
" 25	"	42294	R. B. Seeton & Co., Halifax, N.S.	3 "	40	J. Robertson & Sons, London, Eng.	Manufacturers.	.....		1.40
" 25	"	42295	Chisholm & Co., Halifax, N.S.	3 "	55	Jas. Keiller & Son, Dundee, Scot.	"	.....		1.34
" 26	"	42296	A. & W. Smith & Co., Halifax, N.S.	3 "	40	J. Robertson & Son, London, Eng.	J. W. Goreham, Halifax, N.S.	.....		1.05
" 26	"	42297	Payzant & King, Halifax, N.S.	3 "	25	T. Upton, Hamilton, Ont.	Manufacturers.	Upton's Orange Marmalade.		1.24

DISTRICT OF PRINCE EDWARD ISLAND—

April 6	Marmalade.	46021	W. W. Walker, Charlottetown.	3 jars.	60	Shirriffs, Toronto.	.....	Shirriffs Orange Marmalade.		0.95
" 6	"	46022	J. C. Crabbe, Charl'town.	3 "	54	Chivers & Sons, Cambridge, Eng.	.....	Chivers pure Orange Marmalade.		3.29
" 8	"	46023	L. A. Haszard, Charl'town.	3 "	60	W. P. Hartley, Ltd., Liverpool, Eng.	.....	Guaranteed absolutely pure Orange Marmalade.		1.11
" 8	"	46024	M. Duffy, Charl'town.	3 "	45	Sugars, Ltd., Montreal.	.....	Seville Orange Marmalade.		5.42



## SESSIONAL PAPER No. 14

## MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Readings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

## R. J. WAUGH, INSPECTOR.

p. c.	p. c.	p. c.				p. c.	p. c.					
61.75	63.15	36.85	+ 6.9	-16.9	23.8	17.9	43.85	None.	None.	Orange tissues	42286	Genuine.
59.35	61.89	38.11	+27.3	-14.1	41.4	31.2	28.15	"	"	"	42287	Contains about 3 p.c. glucose, technically adulterated. An old sample.
70.85	72.35	27.65	+12.9	-24.0	33.3	25.1	45.73	"	"	"	42290	Genuine.
74.80	75.89	24.11	+28.8	-18.7	47.5	35.7	40.19	"	"	"	42291	"
68.50	69.85	30.15	+23.0	-19.8	42.8	32.2	36.30	"	"	"	42292	"
67.80	69.37	30.63	+ 8.6	-10.6	19.2	14.4	53.40	"	"	"	42293	Contains about 5 p.c. glucose, technically adulterated.
71.30	72.79	27.30	+34.3	-19.0	53.3	39.9	31.40	"	"	"	42294	Genuine.
68.65	69.99	30.01	+13.0	-21.8	34.8	26.1	42.75	"	"	"	42295	"
79.75	80.80	19.20	+30.2	-17.3	47.5	35.8	43.95	"	"	"	42296	"
74.50	75.74	24.26	+61.2	+25.6	35.6	26.8	47.70	"	"	"	42297	Contains about 25 p.c. glucose, technically adulterated. A very old sample.

## THEO. MOORE, INSPECTOR.

73.96	74.91	25.09	+11.2	-20.6	31.8	23.7	50.26	None.	None.	Orange tissues	46021	Genuine.
83.76	87.06	12.94	+14.0	-18.0	32.0	23.8	59.96	"	"	"	46022	"
73.34	74.46	25.54	+14.9	-18.7	33.6	25.0	48.34	"	"	"	46023	"
8.74	74.17	25.83	+ 8.0	-21.0	29.0	21.9	46.84	"	"	"	46024	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF PRINCE EDWARD ISLAND—

1911.									p. c.
April 10	Marmalade.	46025	C. C. Carlton, Souris.	3 jars	45	Inglis, Montreal.		Inglis Home-made Orange Marmalade.	2·88
" 11	"	46026	Sterns Bros., Souris.	3 "	66	J. Stephens & Son, Gloucester, Eng.		Guaranteed Orange Marmalade.	....
" 11	"	46027	Mathew & McLean, Souris.	3 "	54	J. W. Windsor, Montreal.		Balmoral Scotch Marmalade.	3·49
" 25	"	46028	Sinclair & Stewart, Summerside.	3 "	36	T. Upton & Co., Hamilton, Ont.		Upton pure Orange Marmalade.	2·38
" 25	"	46029	Brace & McKay, Summerside.	3 "	60	Crosse & Blackwell, London, Eng.		Pure Orange Marmalade.	1·92
" 27	"	46030	John McKenna, Charlottetown.	3 "	60	T. J. Lipton, England.		Orange Marmalade.	1·65

DISTRICT OF NEW BRUNSWICK—

Mar. 27	Marmalade.	45444	H. W. Cole, Ltd., St. John, N.B.	3 jars.	45	Crosse & Blackwell, London, Eng.		C. & B. Orange Marmalade.	1·04
" 27	"	45445	Puddington, Wetmore, Morrison, Ltd., St. John, N.B.	"	35	Sugars & Cannery, Ltd., Montreal.		Diamond Orange Marmalade.	2 76
" 28	"	45446	Baird & Peters, St. John, N.B.	"	38	John Stephens Son & Co., Ltd., Gloucester, Eng.		Orange Marmalade.	1·61
April 10	"	45447	G. T. Whelpley Estate, Fredericton, N. B.	"	54	W. P. Hartley, Liverpool and London.		"	1·44
" 11	"	45448	J. Rankin Brown, Woodstock, N.B.	"	75	Jas. Keiller & Sons, Ltd., Dundee, Scot		"Dundee" Marmalade.	1·11
" 13	"	45449	D. R. Bedell, Andover, N. B.	"	75	"		"	1·59
" 13	"	45450	H. N. Dickinson, Perth, N.B.	"	60	C. & E. Morton, Leadenhall St., London, Eng.		Morton's Orange Marmalade.	1·92
" 19	"	45451	The Sussex Mercantile Co., Ltd., Sussex, N.B.	"	75	The T. Upton Co., Ltd., Hamilton, Ont.		Upton's Orange Marmalade.	1·81



SESSIONAL PAPER No. 14  
MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc. at 20°C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

THEO. MOORE, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
63·85	66·73	33·27	+27·7	−19·0	46·7	35·2	28·65	None.	None.	Orange tissues	46025	Genuine.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46026	Samples destroyed by rats.
65·90	69·39	30·61	+17·0	−10·5	27·5	20·7	45·20	"	"	"	46027	Contains about 5 p.c. glucose, technically adulterated.
69·80	72·18	27·82	+38·8	−23·6	62·4	47·0	22·80	"	"	"	46028	Genuine.
65·50	67·42	32·58	+18·7	−21·8	40·5	30·5	35·00	"	"	"	46029	"
70·35	72·00	28·00	+19·0	−22·4	41·4	31·2	39·15	"	"	"	46030	"

J. C. FERGUSON, INSPECTOR.

64·20	65·24	34·76	+26·5	−20·7	47·2	35·5	28·70	None.	None.	Orange tissues.	45444	Genuine.
66·45	69·21	30·79	+18·2	−13·2	31·4	23·6	42·85	"	"	"	45445	Contains about 3% glucose technically adulterated.
61·80	63·41	36·59	+43·7	+ 7·1	36·6	27·5	34·30	"	"	"	45446	Contains about 10% glucose technically adulterated.
73·25	74·69	25·31	+25·0	−23·0	48·0	36·1	37·15	"	"	"	45447	Genuine.
66·50	67·61	32·39	2·9	−20·2	23·1	17·3	49·20	"	"	"	45448	"
69·30	70·89	29·11	+24·4	−24·4	48·8	36·7	32·60	"	"	"	45449	"
51·95	53·87	46·13	+ 2·9	−19·0	21·9	16·5	35·45	"	"	"	45450	"
63·30	65·11	34·89	+32·8	−19·8	52·6	39·9	23·40	"	"	"	45451	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Solids	
				Quantity.	Cents.	Manufacturers	Furnisher.		Insoluble.	

DISTRICT OF NEW BRUNSWICK—

1911.									p. c.
April 20	Marmalade.	45452	D. A. McBeath, Moncton, N. B.	3 jars.	54	Chivers & Sons Ltd., Histon, Cambridge, Eng.		Chiver's Pure Orange Marmalade.	1.67
" 21	" ..	45453	S. A. Russell, Newcastle. N.B.	"	75	Cairns, Paisley, Scotland		Cairn's finest Scotch Home-made Marmalade.	1.41

DISTRICT OF QUEBEC—

Mar. 29	Marmalade.	36901	O. Lacroix, 19 Rue St. Joseph, Que.	3 jars.	24	Wm. P. Hartley, Liverpool.	J B Reneaud & Cie.		1.22
" 29	" ..	36902	"	"	45	Alymer, Canning Co.	Manuf'rs.		2.21
" 29	" ..	36903	"	"	30	Uptons, Hamilton.	J B Reneaud & Cie.		2.10
April 3	" ..	36904	Chas. E. Rivierin, 55 Rue de la Couronne, Quebec.	"	75	Chivers & Sons Histon, Cambridge, Eng.	Turcot et Frère.		1.68
" 3	" ..	36905	"	"	75	Jas. Keiller & Son, Dundee.	N. Rioux & Cie.		1.27
" 4	" ..	36906	Myrand and Pouliot, 70 Rue de la Couronne, Quebec.	"	36	Aylmer Canning Co., Hamilton.	Unknown...		1.90
" 4	" ..	36907	"	"	75	Chivers & Sons Histon, Cambridge, Eng.	J B Reneaud & Cie.		0.60
" 4	" ..	36908	"	"	75	E. D. Smith, Winona, Ont.	"		0.95
" 4	" ..	36909	"	"	75	Jas. Keiller & Son, Dundee.	N. Rivoux & Cie.		1.46
" 4	" ..	36910	"	"	75	Thos. Lipton, London.	Manuf'rs.		1.97

DISTRICT OF ST. HYACINTHE—

Apr. 24	Marmalade..	38912	J. O. Fagnan, Sorel.	3 jars.	60	Crosse & Blackwell, London Eng.		Orange Marmalade.	1.21
" 25	" ..	38913	J. S. Baillargeon, Farnham.	3 ..	54	St. Louis Preserving Co., Ltd., Ville St. Louis, Montreal.		"	3.93



SESSIONAL PAPER No. 14  
MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

J. C. FERGUSON, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
64.45	66.12	33.88	+18.7	-22.2	40.9	30.9	33.55	None.	None.	Orange tissues	45452	Genuine.
67.55	68.96	31.04	+ 7.2	-23.9	31.1	23.2	44.35	"	"	"	45453	"

F. X. W. E. BELAND, INSPECTOR.

70.55	71.77	28.23	+24.5	-20.7	45.2	34.3	36.25	None.	None.	Orange tissue.	36901	Genuine.
67.90	70.11	29.89	50.4	-18.7	69.1	52.0	15.90	"	"	"	36902	"
56.50	58.60	41.40	+ 4.6	-15.5	20.1	15.1	41.40	"	"	"	36903	"
72.10	73.78	26.22	+13.0	-23.3	36.3	27.3	44.80	"	"	"	36904	"
72.30	73.57	26.43	+11.5	-21.5	33.0	24.8	47.50	"	"	"	36905	"
58.00	59.90	40.10	+ 9.0	-10.6	19.6	14.8	43.2	"	"	"	36906	Contains about 3% glucose technically adulterated. An old sample.
71.05	71.65	28.35	+10.0	-21.9	31.9	24.0	47.05	"	"	"	36907	Genuine.
74.30	75.25	24.75	+28.3	-19.0	47.3	35.7	38.60	"	"	"	36908	"
69.55	71.01	28.99	+ 4.3	-23.6	27.9	21.0	48.55	"	"	"	36909	"
67.75	69.72	30.28	+18.7	-22.7	41.4	31.2	36.55	"	"	"	36910	"

J. C. ROULEAU—INSPECTOR.

65.55	66.76	33.24	+ 4.3	-22.2	26.5	19.9	46.86	None.	None.	Orange tissues.	38912	Genuine.
66.05	69.98	30.02	+30.4	-20.4	50.8	38.2	27.85	"	"	"	38913	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF ST. HYACINTHE—

1911.										p. c.
April 26	Marmalade.	38914	E. Rodier, St. Jean.	3 jars.	45	T. Upton Co. Ltd., Hamilton.		Orange mar-		1·92
" 26	"	38915	J. T. Rolland, Bedford.	3 "	39	"		"		1·96
" 27	"	38916	C. Vincent, Granby.	3 "	60	Shirriffs, Toronto.		Imperial Scotch Marmalade.		2·15
May 2	"	38917	J. O. Montplaisir, Drummondville.	3 "	60	Cairns, Paisley				0 96
" 3	"	38919	Hoskins & O'Reagan, Sutton.	3 "	60	Wm. P. Hartley, London, Eng.				1·40
" 4	"	38920	H. F. Barlow, Magog.	3 "	45	T. Upton Co. Ltd., Hamilton, Ont.		Orange Mar-malade.		2·15
" 5	"	38921	C. O. Genest, & Fils, Sherbrooke.	3 "	45	Wagstaffe Ltd, Hamilton, Ont.				1·87
" 23	"	38922	S. N. Fontenault, Marieville.	3 "	69	Chivers & Sons Ltd., Eng.				2·64

DISTRICT OF MONTREAL—

Mar. 24	Marmalade..	40611	J. E. Belisle, 129 Wellington St., Montreal.	3 jars.	45	Aylmer Canning Co, Aylmer, Ont.		Scotch Mar-malade.		3·28
" 25	"	40612	A. Rochon, Prince Arthur, E, Montreal.	25 3 "	45	Millward & Bentley, Montreal.				2·39
" 25	"	40613	J. Gariepy, 101 Prince Arthur E., Montreal.	3 "	30	Uptons.....				1·44
" 27	"	40614	S. L. Desaulniers, 437 Notre Dame E., Montreal	3 "	30	Sugars Ltd., Montreal.		"Oval" Brand		1·74
Apr. 10	"	40615	Murphy Bros., 531 St. Catherine St., Montreal.	3 "	30	Inglis, Mon-treal.				6·02
" 10	"	40615	Co-operative Grocery Co., 293 St. Antoine St., Montreal.	3 "	30	Vendors ....		Labelled, Widow Robins Home made fine Com-pound.		3·90



## SESSIONAL PAPER No. 14

## MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Readings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical examination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

J. C. ROULEAU, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
66·75	68·67	31·33	+28·2	-20·7	48·9	36·09	29·85	None.	None.	Orange tissues.	38914	Genuine.
64·60	66·56	33·44	+25·0	-18·2	43·2	32·4	32·20	"	"	"	38915	"
68·32	70·48	29·52	+20·8	-20·0	40·8	30·8	37·52	"	"	"	38916	"
68·85	69·81	30·19	-6·2	-21·4	15·2	11·4	57·45	"	"	"	38917	"
72·75	74·15	25·85	+18·8	-19·4	38·2	28·5	44·25	"	"	"	38919	"
66·85	69·00	31·00	+13·8	-19·8	33·6	25·3	41·55	"	"	"	38920	
60·95	62·82	37·16	+8·1	-19·8	27·9	21·0	39·95	"	"	"	38921	"
66·95	69·59	30·41	+4·2	-19·6	26·8	20·2	46·75	"	"	"	38922	"

## J. J. COSTIGAN—INSPECTOR.

58·00	61·28	38·72	-7·0	-15·4	8·4	6·3	51·70	None.	None.	Orange tissues.	40611	Genuine.
60·00	62·39	37·61	+2·9	-20·7	23·6	17·7	42·30	"	"	"	40612	"
71·00	72·44	27·56	+31·6	-21·6	53·2	40·1	30·90	"	"	"	40613	"
73·60	75·34	24·66	+31·1	-21·3	52·4	39·5	35·84	"	"	"	40614	"
61·50	67·52	32·48	+22·7	-21·3	44·0	33·1	28·40	"	"	"	40615	"
59·65	63·55	36·45	+28·5	-1·8	30·3	22·9	36·75	"	"	Orange & Grape Fruit.	40615	Orange and Grape fruit, contains about 10 p. c. glucose, declared.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF MONTREAL—

1911.									p. c.	
April 10	Strawberry Jam.	40616	Beauvais La- londe & Co., 482 St. James St, Montreal	3 jars.	60	.....	.....	Gazelle Brand	12.86	
" 11	Marmalade..	40617	R. L. Watkins 789 St. Law- rence B. Montreal.	3 "	38	Vendor. . . .	.....	.....	9.67	
" 11	"	40618	E. Brais, 709 St. Lawrence B., Montreal	3 "	30	Mrs. Luke, Montreal.	.....	.....	2.39	
" 11	"	40619	J. L. Desaul- niers, 492 St. Lawrence B. Montreal.	3 "	45	Aylmer Can- ning Co., Hamilton, Ont.	.....	Canada First.	5.63	

DISTRICT OF OTTAWA—

April 3	Marmalade.	43211	Lucas & Mc- Leary, Smiths Falls.	3 jars.	30	The T.A. Lytle Co., Ltd., Toronto.	Robertson Nicolle, Smiths Falls.	Orange Mar- malade.	0.75	
" 3	"	43212	Williams & Vauluven Smiths Falls	3 "	36	T. Upton Co. Ltd., Hamil- ton.	Gilmour & Co., Brock- ville.	Uptons pure Orange Mar- malade.	5.23	
" 4	"	43213	Gloucester Trading Co., Rideau St., Ottawa.	3 "	75	Jas Robertson & Son, Lon- don, Eng.	H.N. Bate & Sons, Ot- tawa.	Robertsons Pineapple Marmalade.	7.93	
" 4	"	43214	A. E. Rea & Co., Ltd., Rideau St., Ottawa.	3 "	105	Wagstaffes, Hamilton.	Balfour Smyl & Co., Ha- milton.	Wagstaffes Fig Mar- malade.	6.28	
" 4	"	43215	Alex. Phillips, Rochester St., Ottawa.	3 "	75	.....	Manuf'rs..	Ginger Mar- malade.	9.21	
" 5	"	43216	J. K. White- law, Arnprior	3 "	30	S. Upton Co., Ltd., Hamil- ton.	Unknown...	Uptons pure Orange Mar- malade.	2.35	
" 6	"	43217	R. McGregor, Ltd., Ottawa	3 "	53	Shirreffs, To- ronto.	Manuf'rs..	Imperial Scotch Or- ange Mar- malade.	2.31	
" 6	"	43218	W.B. Graham, Ottawa.	3 "	75	Chivers & Sons Ltd., Histon Cambridge, Eng.	Unknown...	Orange Mar- malade, labelled pure.	2.70	
" 7	"	43219	P. C. Leslie & Co., Prescott	3 "	45	Canadian Pre- serving Co., Hamilton.	Manuf'rs.	Grahams "Lily Brand" pure Orange Marmalade.	2.27	
" 7	"	43220	J. Whitley, Prescott.	3 "	60	Shirreffs, To- ronto.	.....	Imperial Scotch Or- ange Mar- malade.	4.54	



## SESSIONAL PAPER No. 14

## MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Readings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

J. J. COSTIGAN, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
63.10	75.96	24.04	+21.6	-21.6	43.2	32.5	30.60	None.	None.	Strawberry tissues.	40616	Strawberry jam — Genuine.
58.50	68.17	31.83	+17.3	-19.5	36.8	37.7	20.80	"	"	Orange tissues.	40617	Genuine.
63.95	66.24	33.76	- 1.0	-19.8	18.8	14.1	49.85	"	"	"	40618	"
58.10	63.46	36.54	+21.6	-14.4	36.0	27.1	31.00	"	"	"	40619	Contains about 2 p.c. glucose technically adulterated.

## J. A. RICKEY—INSPECTOR.

67.55	68.30	31.70	+36.1	-18.7	44.8	33.9	33.65	None.	None.	Orange tissues.	43211	Genuine.
67.40	72.63	27.37	+41.7	-22.2	63.9	48.1	19.30	"	"	"	43212	"
61.75	69.68	30.32	+18.7	-20.4	39.1	29.4	32.35	"	"	"	43213	Pineapple genuine.
62.50	68.78	31.22	+33.1	-17.2	50.3	37.9	24.60	"	"	"	43214	Green figs "
62.25	75.46	24.54	+34.5	-22.2	56.7	42.7	23.35	"	"	"	43215	Ginger genuine.
61.00	63.35	36.65	+27.4	-20.7	48.1	36.2	24.80	"	"	"	43216	Genuine.
69.40	71.71	28.29	+1.5	-22.8	24.3	18.0	51.40	"	"	"	43217	"
62.25	64.95	35.05	+4.3	-20.7	25.0	18.8	43.45	"	"	"	43218	"
63.50	65.77	34.23	+27.4	-19.9	47.3	35.7	27.80	"	"	"	43219	"
73.30	77.84	22.16	-3.2	-22.2	19.0	14.3	59.00	"	"	"	43220	"



Date of Collection.	Name of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF KINGSTON—

1911.										p.c.
Mar. 24	Marmalade.	47766	W.E. Hopkinson, Kingston	3 jars.	45	Grahams, Hamilton.				2.90
" 24	"	47768	L. Murphy, Kingston.	3 "	75	Cross & Blackwell, London, Eng.				1.28
" 24	"	47769	S. T. Kirk, Kingston.	3 "	30	Upton's Hamilton.	Fenwick Hendry Co., Kingston.			2.38
" 24	"	47770	P. A. Haffner, Kingston.	3 "	45	Maconochie, Bros., London.				1.74
" 24	"	47771	J. McCulla, Kingston.	3 "	100	Millar & Co., Ltd., Belfast Ireland.				
" 27	"	47772	R. Elvins, Belleville.	3 "	30	Upton's Hamilton.				1.18
" 27	"	47773	H.E. Fairfield, Belleville.	3 "	75	Maconochies, London.				1.60
" 27	"	47774	H. Crozier, Co. bourg.	3 "	75	E. A. Smith, Winona.				2.54
" 28	"	47775	J. Curtis, Port Hope.	3 "	30	Upton's Hamilton.				1.26
" 24	"	47791	Geo. Gibson, Kingston.	3 "	30	"	Geo. Robertson & Son, Kingston.			1.83

DISTRICT OF TORONTO—

April 3	Marmalade..	47262	A. Rayner, Barrie.	3 jars.	30	T. Upton Co., Ltd, Hamilton.		Upton's Pure Orange Marmalade.		2.35
" 3	"	47263	T. B. Cramp, Orillia.	3 "	60	The Canada Preserving Co., Ltd., Hamilton.		Graham's Lily Brand Pure Orange Marmalade.		0.76
" 5	"	47264	Oliver Hubert, Penetanguishene.	3 "	45	Not named....	John D.erson			1.83
" 6	"	47265	W. J. Lyon, Queen st., East, Toronto.	3 "	30	Aylmer Canning and Preserving Co., Ltd., Hamilton.		Aylmer Scotch Marmalade, Absolutely Pure.		1.57
" 6	"	47266	R. Millar, 336 Queen St., E., Toronto.	3 "	30	Mrs. A. E. Scott, Toronto.		Home-made Orange Marmalade, Guaranteed Absolutely Pure.		6.88



SESSIONAL PAPER No. 14

MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Readings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical examination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

JAS. HOGAN—INSPECTOR.

p.c.	p.c.	p.c.				p.c.	p.c.					
65.25	68.15	31.85	+32.2	−23.6	55.8	42.0	23.25	None.	None.	Orange tissues.	47766	Genuine.
60.95	62.23	37.77	+4.3	−22.2	26.5	19.9	41.05	"	"	"	47768	"
73.90	76.23	23.72	+2.3	−24.8	22.5	16.9	57.00	"	"	"	47769	"
63.75	65.49	34.51	+28.2	−21.6	49.8	37.5	25.25	"	"	"	47770	"
.....	.....	.....	.....	.....	.....	.....	.....	"	"	"	47771	Samples destroyed by rats.
62.25	63.43	36.57	+52.4	−19.8	72.2	54.2	8.05	"	"	"	47772	Genuine remarkably high unchanged sugar.
57.05	58.65	41.35	+3.2	−17.8	21.0	15.80	41.25	"	"	"	47773	Genuine.
65.00	67.54	32.46	+28.2	−19.8	48.0	36.1	28.90	"	"	"	47774	"
68.90	70.16	29.84	+21.3	−22.7	44.0	33.1	35.80	"	"	"	47775	"
72.25	74.08	25.92	+34.0	−21.3	65.3	41.7	30.55	"	"	"	47791	"

H. J. DAGER, INSPECTOR.

69.15	71.50	28.50	+25.9	−18.4	44.3	33.4	35.75	None.	None	Orange tissues.	47262	Genuine.
59.25	60.01	39.99	+20.7	−22.7	43.4	32.7	26.55	"	"	"	47263	"
66.15	67.98	32.02	−13.0	−20.7	7.7	5.8	60.35	"	"	"	47264	"
61.10	62.67	37.33	+ 2.0	−15.8	18.4	13.9	47.20	"	"	"	47265	Containing a trace of glucose.
63.75	70.63	29.37	+11.5	−20.7	32.2	24.2	38.55	"	"	"	47266	Genuine.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF TORONTO—

1911.										p c.
April 6	Marmalade.	47267	Bruce & Sanderson, 377 Parliament St., Toronto.	3 jars.	45	The Imperial Extract Co., Toronto.	.....	Shirriff's Imperial Scotch Marmalade.	2	67
" 6	"	47268	G. McKee, 564 College St., Toronto.	3 "	30	F. Simpson & Sons, Toronto.	.....	F. Simpson & Sons, Home-made Orange Marmalade.	5	69
" 10	"	47269	Wm. Smye, Jr., 75 Wellington St., Hamilton.	3 "	60	Wagstaffe, Ltd., Hamilton.	.....	Guaranteed not to contain colouring, preservatives or glucose.	4	35
" 10	"	47270	Geo. O. Elder, Mary St., N. Hamilton	3 "	45	E. D. Smith, Winona.	.....	Orange Marmalade.	4	33
" 11	"	47271	W. H. Rykman & Co., 19 McNabb, N. Hamilton	3 "	30	Not named.	.....		2	65

DISTRICT OF LONDON—

April 26	Marmalade.	48005	Stuebing & Son, Berlin.	3 jars.	60	Robertson's Paisley.	Jas. Lumbers & Co. Toronto.	Robertson's Scotch Marmalade.	1	26
" 26	"	48007	Randall & Roos, Berlin.	3 "	50	Jas. Keiller & Sons, Dundee.	.....		1	56
" 26	"	48017	Betzner & Co., Berlin.	3 "	30	T. Upton Co., Hamilton.	.....	Upton's Pure Orange Marmalade.	1	87
" 26	"	48019	W. Yeats, Galt.	3 "	60	Maconochie Bros., London, Eng.	.....	Maconochie Bros. Seville Orange Marmalade	1	66
" 27	"	48027	Hollands & Macauley, Galt.	3 "	54	Canada Preserving Co., Hamilton.	.....	Graham's Lily Brand Pure Orange Marmalade.	1	32
" 25	"	48385	A. J. Groom, Guelph.	3 "	60	Wagstaffe, Hamilton.	.....		2	33
" 25	"	48389	J. A. McCrea & Son, Guelph	3 "	30	Canada Preserving Co., Hamilton.	.....		1	19
" 25	"	48390	J. M. Dooley, Guelph.	3 "	30	T. Upton Co., Hamilton.	.....		1	49
" 25	"	48392	Guelph Co. Operative Association, Guelph.	3 "	30	"	.....	Upton's Pure Orange Marmalade.	1	85



SESSIONAL PAPER No. 14  
MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

H. J. DAGER, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
68·80	71·47	28·53	+18·1	−21·3	39·4	27·9	40·90	None.	None.	Orange tissues.	47267	Genuine.
65·40	71·09	28·91	+16·7	−19·0	35·7	26·4	39·00	"	"	"	47268	"
64·50	68·88	31·12	+27·9	−22·2	50·1	38·5	26·00	"	"	"	47269	"
65·60	69·93	30·07	+ 8·6	−22·2	30·8	23·2	42·40	"	"	"	47270	"
60·40	63·05	36·95	+15·3	−21·6	36·9	28·5	31·90	"	"	"	47271	"

JNO. TALBOT, ACTING INSPECTOR.

66·75	68·01	31·99	+33·1	−21·3	54·4	41·0	25·75	None.	None.	Orange tissues.	48005	Genuine.
68·45	70·01	29·99	− 8·4	−23·0	14·6	11·0	57·45	"	"	"	48007	"
61·70	63·57	36·43	+28·5	−19·0	47·5	35·8	25·90	"	"	"	48017	"
71·95	73·61	26·39	+ 2·9	−23·0	25·9	19·5	52·45	"	"	"	48019	"
66·70	68·02	31·98	+31·1	−23·9	55·0	41·4	25·30	"	"	"	48027	"
78·90	81·23	18·77	+31·7	−23·5	55·2	41·6	37·30	"	"	"	48385	"
77·60	78·79	21·21	+32·4	−21·6	54·0	40·8	36·8	"	"	"	48389	"
67·35	68·84	31·16	+41·8	−20·7	62·5	47·1	20·25	"	"	"	48390	"
61·80	64·65	35·35	+38·9	−19·0	57·9	43·6	18·20	"	"	"	48392	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF LONDON—

1911.										p. c.
April 25	Marmalade.	48394	J a s. G o w, Guelph.	3 jars.	60	W a g s t a f f e, Hamilton.		Fine Old English Jelly Shred Marmalade.		1.45

DISTRICT OF WINDSOR--

April 18	Marmalade.	48343	A. M. Smith & Co., London, Ont.	3 jars.	40	W a g s t a f f e, Hamilton.				2.81
" 18	"	48346	M. Masuret & Co., London, Ont.	3 "	25	T. Upton Co., Hamilton.		Upton's pure Orange Marmalade.		1.82
" 18	"	48347	Ed. Adams & Co., London, Ont.	3 "	25	Aylmer Canning Co., Hamilton.		Aylmer Scotch Marmalade absolutely pure.		2.45
" 18	"	48348	W. T. Mullens, London, West Ont.	3 "	30	T. Upton Co., Hamilton.		Upton's pure Orange Marmalade.		1.78
" 18	"	48350	R. H. Wade, London, W. Ont.	3 "	30	T. Upton Co., Hamilton.				2.09
" 18	"	48352	R. W. James, London, W. Ont.	3 "	45	Crosse & Blackwell, London, Eng.		Pure Orange Marmalade.		1.63
" 19	"	48354	Wm. Cross, Strathroy.	3 "	75	W a g s t a f f e, Hamilton.				2.62
19	"	48356	J. E. Pedlow, Strathroy.	3 "	30	Aylmer Canning Co., Hamilton.				1.89
19	"	48364	Bon Marché, Brantford.	3 "	60	Jas. Robertson & Sons, Paisley Scot.				2.35

DISTRICT OF MANITOBA—

April 19	Marmalade.	43553	W. J. Young, Brandon.	3 jars.	75	John Buchanan & Bros., Ltd., Glasgow.		Buchanan's Home made Marmalade.		1.12
" 19	"	43554	W. J. Young, Brandon.	3 "	75	Shirriffs, Toronto.		Imperial Scotch.		1.66
" 19	"	43555	Smith & Burton, Brandon	3 "	75	Crosse & Blackwell, London, Eng.		Orange Marmalade.		1.26
19	"	43556	The Codville Co., Ltd., Brandon.	3 "	45	E. D. Smith, Winona, Ont.		Orange Marmalade.		1.94



## SESSIONAL PAPER No. 14

## MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

JNO. TALBOT, ACTING INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
74·60	76·05	23·95	+26·5	−24·8	51·3	38·7	35·90	None.	None.	Orange tissues.	48394	Genuine.

## JNO. TALBOT, INSPECTOR.

70·75	73·56	26·44	+20·2	−21·6	41·8	31·2	39·55	None.	None.	Orange tissues.	48343	Genuine.
70·05	71·87	28·13	+31·7	−21·3	53·0	39·9	30·15	"	"	"	48346	"
67·15	69·60	30·40	+23·0	−15·8	38·8	29·2	37·95	"	"	"	48347	Contains a trace of glucose.
64·75	66·53	33·47	+25·9	−22·0	47·9	36·1	28·65	"	"	"	48348	Genuine.
70·95	73·04	26·96	+34·0	−23·8	57·8	43·5	27·45	"	"	"	48350	"
75·75	77·38	22·62	+ 1·4	−21·6	23·0	17·3	58·45	"	"	"	48352	"
72·95	75·57	24·43	+30·4	−23·0	53·4	40·2	32·75	"	"	Pine apple tissues.	48354	Pine apple, genuine.
68·15	70·04	29·96	+36·8	−18·1	54·9	41·3	26·85	"	"	Orange tissue.	48356	Genuine.
70·70	73·05	26·95	+27·4	−21·6	49·0	36·9	33·80	"	"	"	48364	"

## A. C. LARIVIERE, INSPECTOR.

67·75	68·87	31·13	+13·0	−22·7	35·7	26·9	40·85	None.	None.	Orange tissues.	43553	Genuine.
70·80	72·46	27·54	+18·4	−21·8	40·2	30·3	40·50	"	"	"	43554	"
67·25	68·51	31·49	+37·4	−21·0	58·4	44·0	28·20	"	"	"	43555	"
72·20	74·14	25·86	+23·0	−23·8	46·8	35·20	37·20	"	"	"	43556	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids Insoluble.
				Quantity.	Cents.	Manufacturer.	Furnisher.		

DISTRICT OF MANITOBA—

1911.									p. c.
April 19	Marmalade.	43557	The Codville Co., Ltd., Brandon.	3 jars.	46	Jas. Robertson & Sons, Manchester.		Robertson's Scotch Marmalade	1.40
" 20	"	43558	Foley Bros., Larson, Winnipeg.	3 "	44	Wm. P. Hartley, London.		Jelley Marmalade.	1.45
" 20	"	43559	Foley Bros., Larson, Winnipeg.	3 "	43	E. D. Smith, Winona, Ont.		Orange Marmalade.	2.99
" 20	"	43560	The Jobin Marrin Co., Ltd., Win'g.	3 "	60	Chivers & Sons, Ltd., Histon, Eng.		Imperial Home made Marmalade.	1.45
" 20	"	43561	The Jobin Marrin Co., Ltd., Win'g.	3 "	60	W. J. Brigger, Hamilton.		Pure Orange Marmalade.	1.79
" 21	"	43562	H. Slasor, 145 Sherbrooke St.	3 "	75	L. Noel & Sons, Southwark, London.		Ginger Marmalade.	2.76

DISTRICT OF CALGARY—

May 3	Marmalade.	43812	J. H. Morris & Co., Edmonton.	3 jars.	75	A. Cairns & Sons, Paisley Scot.			1.99
" 3	"	43813	Hallier & Aldridge, Edmonton.	3 "	75	Chivers & Sons, Ltd., Histon Cambridge, Eng.			1.80
" 3	"	43814	Acme Co. Ltd. Edmonton.	3 "	75	Wagstaffe, Ltd Hamilton.			1.95
" 3	"	43815	Hudson Bay Co., Edmonton.	3 "	75	Cross & Blackwell, London, Eng.			1.72
" 3	"	43816	The Capitol Mercantile Co., Edmonton.	3 "	75	"			1.75
" 9	"	43817	L. T. Mewburn & Co. Ltd., Calgary.	3 "	75	Wagstaffe, Ltd Hamilton.			2.05
" 10	"	43818	Georgeson & Co. Limited, Calgary.	3 "	75	E. D. Smith, Winona, O.			0.75
" 10	"	43819	Campbell, Wilson & Horne, Calgary.	3 "	75	Jas Robertson & Sons, Paisley, Scot.			1.10
" 10	"	43820	G. F. & J. Galt, Calgary.	3 "	75	"			1.59
" 10	"	43821	Hudsons Bay Co., Calgary	3 "	60	T. Upton Co., Ltd., Hamilton.			2.75



SESSIONAL PAPER No. 14  
MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.			Polarimeter Read- ings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.	Water.	Direct.	Invert.	Difference.							

A. C. LARIVIERE, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
69·00	70·40	29·60	+13·0	−24·2	37·2	28·00	41·00	None.	None.	Orange tissues.	43557	Genuine.
74·50	75·95	24·05	+13·8	−24·2	38·0	28·6	45·90	"	"	"	43558	"
81·75	84·74	15·26	+31·1	−22·8	53·9	40·6	41·15	"	"	"	43559	"
75·25	76·70	23·30	+ 7·2	−22·2	29·4	22·1	54·15	"	"	"	43560	"
66·10	67·89	32·11	+10·1	−20·7	30·8	23·2	42·90	"	"	"	43561	"
74·55	77·31	22·69	+62·4	17·2	45·2	34·0	40·55	"	"	Ginger tissues.	43562	Ginger. Contains about 25½ p.c. glucose. Technically adulterated.

R. W. FLETCHER—INSPECTOR.

62·85	64·84	35·16	− 1·5	−17·8	16·3	12·2	50·65	None.	None.	Orange tissues.	42812	Genuine.
66·25	69·05	30·95	+13·5	−22·2	35·7	26·9	40·35	"	"	"	43813	"
67·70	69·65	30·35	+27·0	−23·8	50·8	38·2	29·50	"	"	"	43814	"
66·15	67·87	32·13	+28·5	−20·7	49·2	37·0	30·87	"	"	"	43815	"
62·25	64·00	36 00	+ 9·5	−22·2	31·7	24·1	38·15	"	"	"	43816	"
68 50	70·55	29·45	+21·6	−20·0	41·6	31·4	37·10	"	"	"	43817	"
78·70	79·45	20·55	+ 1·4	−26·5	27·9	21·0	57·70	"	"	"	43818	"
69·95	71·05	28·95	+43·2	−20·5	63·7	48·0	21·95	"	"	"	43819	"
71·25	72·84	27·16	+30·2	−23·6	53·8	40·5	30·75	"	"	"	43820	"
69·25	72·00	28·00	+30·2	−23·8	54·0	40·7	31·30	"	"	"	43821	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF NELSON—

1911.										p. c.
May	3	Marmalade.	48401	Kootenay Jam & Co., Nelson, B.C.	3 jars.	25	Vendors	.....	.....	2.42
"	3	"	48402	"	3 "	25	"	.....	.....	1.73
"	3	"	48407	A. McDonald Co., Nelson, B.C.	3 "	53	Jas Keiller & Sons, Dundee, Scotland	.....	.....	1.82
"	3	"	48408	"	3 "	49	T. Upton Co., Hamilton, O.	.....	.....	2.16
"	3	"	48409	"	3 "	52	Cross & Blackwell, Eng.	.....	.....	1.81

DISTRICT OF VANCOUVER—

April	22	Marmalade.	38145	London Grocery, 210 Granville St., Fairview, Van., B.C.	3 jars.	75	J. Stephens & Sons, Gloucester, Eng.	.....	Finest quality	1.57
"	24	"	38146	A. & C. Grocery, 637 Granville St., Van.	3 "	75	Noel & Sons, London, Eng.	.....	Guaranteed Pure.	0.88
"	24	"	38147	London Grocery, 632 Granville St., Van.	3 "	75	W.P. Hartley, London, Eng.	.....	Guaranteed Absolutely Pure.	1.54
"	24	"	38148	Hudson Bay Co., Granville St., Van.	3 "	30	E. D. Smith, Winona, Ont.	.....	.....	1.10
"	24	"	38149	T. F. McDowell, 704 Granville St., Van.	3 "	90	F. Cooper, Oxford, Eng.	.....	Warranted Pure.	6.27
"	24	"	38150	J. McTaggart & Co., 798 Granville St., Van.	3 "	60	Crosse & Blackwell, London, Eng.	.....	.....	1.66
"	24	"	38151	Glasgow Grocery, 716 Robson St., Van.	3 "	45	Chivers & Sons, Cambridge, Eng.	.....	.....	1.41
"	24	"	38152	Turners Grocery, 890 Pender St., Van.	3 "	60	J. Keiller & Sons.	.....	.....	1.77



SESSIONAL PAPER No. 14  
MARMALADES.

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.		
Soluble.	Total.		Direct.	Invert.	Difference.							

THOS. PARKER—INSPECTOR.

p. c.	p. c.	p. c.				p. c.	p. c.					
71.00	73.42	26.58	+45.2	-10.0	55.2	41.6	29.40	None.	None.	Orange tissues.	48401	Contains about 5% glucose technically adulterated.
74.00	75.73	24.27	+73.2	+15.8	57.4	43.2	30.80	"	"	Lemon tissues.	48402	Contains about 25% glucose technically adulterated.
61.30	63.12	36.88	+ 4.3	-22.2	26.5	19.9	41.40	"	"	Orange tissues.	48407	Genuine.
67.25	69.41	30.59	+20.2	-19.9	40.1	30.2	37.05	"	"	"	48408	"
68.25	70.06	29.94	+23.2	-21.2	44.4	33.4	34.85	"	"	"	48409	"

J. F. POWER, INSPECTOR.

66.10	67.67	32.33	+43.7	-21.6	65.3	48.7	17.40	None.	None.	Orange tissues.	38145	Geniune.
70.12	71.00	29.00	+ 0.4	-21.0	21.4	16.1	54.02	"	"	"	38146	"
72.18	73.72	26.28	+17.6	-19.3	36.9	27.5	44.68	"	"	"	38147	"
70.15	71.25	28.75	+25.0	-23.4	48.4	36.5	33.65	"	"	"	38148	"
57.78	64.05	35.95	+18.2	-20.9	39.1	29.1	38.68	"	"	"	38149	"
70.75	72.41	27.59	+21.0	-22.7	43.7	32.1	28.65	"	"	"	38150	"
69.14	70.55	29.45	+11.7	-21.3	33.0	24.6	44.54	"	"	"	38151	"
72.25	74.02	25.98	+12.2	-22.7	34.9	26.3	45.95	"	"	"	38152	"



Date of Collection.	Nature of Sample.	No of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).	Solids	
				Quantity.	Cents.	Manufacturer.	Furnisher.		Insoluble.	

DISTRICT OF VANCOUVER—

1911.										p. c.
April 24	Marmalade.	38153	J. R. Gosling 942 Pender St., Van.	3 jars.	45	J. Robertson & Sons, Pais- ley, Scot.				2·64
" 24	"	38154	H. A. Edgett & Co., 153 Hastings St., Van.	3 "	75	" "				4·49

DISTRICT OF VICTORIA—

May	5	Marmalade	47555	Windsor Gro- cery Co., Victoria, B.C.	2 jars.	50	E. D. Smith, Windsor, Ont.		E. D. Smith's Orange Mar- malade.	1·54
"	5	"	47556	"	3 "	75	W. P. Hartley, London, Eng.		Wm. P. Hart- ley's Jelly Marmalade.	3·49
"	5	"	47557	D. H. Ross & Co., Vic- toria, B.C.	3 "	75	L. Noel & Sons, London, Eng.		Afternoon Tea Marmalade.	2·17
"	5	"	47558	"	3 "	75	Jas. Keiller & Sons., Ltd., Dundee, Scot.		Dundee Mar- malade.	3·47
"	5	"	47559	West End Gro- cery Co., Ltd., Vic- toria, B.C.	3 "	45	Crosse & Black- well, Lon- don, Eng.		C. & B. Orange Marmalade.	4·54
"	5	"	47560	"	3 "	75	The T. Upton, Co., Ltd., Hamilton.		Upton's Pure Orange Mar- malade.	4·83
"	11	"	47561	Harrison & MacDonald, Victoria, B.C.	2 "	30	Chivers & Sons, Histon, Cam- bridge, Eng.		Chiver's Pure Orange Mar- malade.	2·56
"	11	"	47562	"	3 "	75	Jas. Robertson & Sons, Pais- ley, Scot.		Robertson's Golden Shr- ed Marma- lade.	0·74
"	12	"	47563	Copas & Young, Vic- toria, B.C.	3 "	75	Crosse & Black- well, Lon- don, Eng.		Crosse & Black- wells Lemon Marmalade.	3·37
"	12	"	47564	H. O. Kirk- ham, Vic- toria, B.C.	3 "	75	E. D. Smith, Windsor, Ont.		E. D. Smith's Grape Mar- malade.	6·61



## SESSIONAL PAPER No. 14

## MARMALADES.

RESULTS OF ANALYSIS.												
per cent.		Water.	Polarimeter Read- ings normal weight in 100 cc. at 20° C.			Residual cane sugar (Clerget).	Soluble matter other than cane sugar.	Preservatives.	Dyes.	Microscopical exa- mination.	No of Sample.	Remarks and Opinion of the Chief Analyst.
Soluble.	Total.		Direct.	Invert.	Difference.							

J. F. POWER, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.				p. c.	p. c.					
68.74	71.38	28.62	+21.8	-23.7	45.5	33.9	34.84	None.	None.	Orange tissues.	38153	Genuine.
65.50	69.99	30.01	+19.6	-19.6	39.2	29.5	36.00	"	"	"	38154	"

## D. O'SULLIVAN, INSPECTOR.

74.70	76.24	23.78	+28.0	-23.8	51.8	39.0	35.70	None.	None.	Orange tissues.	47555	Geniune.
68.25	71.74	28.26	+15.8	-21.6	37.4	28.1	40.15	"	"	"	47556	"
63.75	65.92	34.08	- 5.8	-20.7	14.9	11.2	52.55	"	"	"	47557	"
67.50	70.97	29.03	+ 1.4	-20.7	22.1	16.6	50.90	"	"	"	47558	
64.25	69.79	30.21	+1.4	-20.7	22.1	16.6	47.65	"	"	"	47559	
63.25	68.08	31.92	+15.8	-22.0	37.8	29.2	34.05	"	"	"	47560	
61.75	64.31	35.69	- 1.4	-19.6	18.2	13.7	51.05	"	"	"	47561	"
66.75	67.49	32.51	+14.0	21.6	35.6	26.8	39.95	"	"	"	47562	"
64.55	67.92	32.08	+10.0	-19.3	9.3	7.0	57.55	"	"	"	47563	Lemon Geniune.
56.40	63.01	36.99	-17.3	-21.6	6.3	4.7	51.70	"	"	Grape tissues.	47564	Grape "



3 GEORGE V., A. 1913

## APPENDIX J.

## BULLETIN No. 234—SWEET SPIRIT OF NITRE.

OTTAWA, February 15, 1912.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to report upon a collection of seventy-four (74) samples of sweet spirit of nitre purchased throughout Canada in October last.

*Dunlison (Medical Dictionary, 23rd Edition)* describes this drug as ‘refrigerant, diuretic, antispasmodic and diaphoretic, and largely employed as an ingredient of fever mixtures.’

*The National Dispensatory, 5th Edition, p. 1499*, says of the drug: ‘In febrile conditions it is much used to promote critical sweating, which it properly does by abating the morbid activity of the heart, and tension of the arteries. As a diuretic it is commonly employed to relieve strangury produced by cantharides; in all painful affections of the urinary apparatus, whether occasioned by calculous or inflammatory disorders, and in the various affections of the kidneys in which congestion of those organs and diminished secretion of urine occurs.’

I quote these authorities in order to emphasize the importance of this drug. It follows naturally that pharmacists who supply the article, are greatly to be blamed when sweet spirit of nitre, as furnished to physicians and to the public, is not of standard quality.

The British Pharmacopœia requires that, when fresh, it should contain  $2\frac{1}{2}$  per cent by weight of ethyl nitrite; and that it should never contain less than  $1\frac{3}{4}$  per cent of ethyl nitrite.

The United States Pharmacopœia (eighth revision) requires a minimum of 4 per cent of ethyl nitrite.

Sweet spirit of nitre deteriorates on keeping; and the British Pharmacopœia (1898) instructs that, ‘the spirit of nitrous ether be kept in well closed vessels, preferably in a cool dark place, and in small bottles.’

This drug was inspected in 1908, and, the results of analysis are reported in Bulletin No. 167. At that time I took occasion to remark: ‘It is well known that this preparation gradually loses its strength on keeping. The fact is expressly stated in the pharmacopœias. It follows that druggists should take proper precautions to enable them to guarantee the article which they dispense, as meeting at least the minimum strength officially required.’

In 1908, 63 per cent of the collection was found to be adulterated, 3 samples containing no nitrous ether whatever. The present collection shows 43 per cent adulterated with 5 samples containing no ethyl nitrite.

It is clear that the retail dealer is to be held responsible for the character of the drug in this case. He may be able to throw back responsibility upon the manufacturer if he holds a warranty under section 33 of the Act; but in this case he would naturally be required to prove that the article had not deteriorated while in his possession.



## SESSIONAL PAPER No. 14

The following synoptical table shows the results of inspections in 1908 and 1911:—

Date.	Bulletin.	Total Samples.	Genuine.	Adulterated.	Percentage of Adulteration.
1908.....	167	77	28	49	63
1911.....	234	74	42	32	43

In view of the unsatisfactory character of this important drug, as found on the Canadian retail markets, it is desirable that another inspection be made at an early date.

One sample (No. 47847) contains 24·55 per cent of ethyl nitrite, and is therefore much too strong for safe administration as sweet spirit of nitre. I have judged this to be adulterated, since sold under the name quoted.

A concentrated solution of ethyl nitrite is mentioned by Squire (Companion to B. P., 18th edition, p. 1140) as sold under the name *Itrosyl*. It is said to keep better than the pharmacopœal spiritus, and is diluted with 95 per cent alcohol to proper strength for immediate preparation of this last.

I beg to recommend the publication of this report as Bulletin No. 234.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NOVA SCOTIA—

1911.							
Oct.	25	Spiritus Ætheris Nitrosi.	46731 Nat. Drug & Chem. Co., Halifax, N.S.	3 ozs.	25	.....	Manufacturers..
"	26	"	46732 Brown Bros. & Co., Halifax, N.S.	3 "	30	.....	" ..
"	26	"	46733 John R. Rawley, Halifax, N.S.	3 "	30	.....	" ..
"	26	"	46734 J. McD. Taylor, Halifax, N.S.	3 "	40	.....	.....
"	26	"	46740 J. D. Walsh, Halifax, N.S.	3 "	30	Unknown .....	.....

DISTRICT OF PRINCE EDWARD ISLAND—

Oct.	14	Spiritus Ætheris Nitrosi.	46101 George E. Hughes, Charlottetown, P.E.I.	3 ozs	30	.....	.....
"	16	"	46102 Johnson & Johnson, Charlottetown, P.E.I.	3 "	30	.....	.....
"	20	"	46103 Dr. F. W. Jardine, Kensington, P.E.I.	3 "	30	.....	.....
"	20	"	46104 " " "	3 "	30	.....	.....

DISTRICT OF NEW BRUNSWICK—

Oct.	12	Spiritus Ætheris Nitrosi.	45535 Nat. Drug & Chem. Co., St. John, N.B.	3 ozs.	30	.....	.....
"	20	"	45536 E. Clinton Brown, St. John, N.B.	3 "	30	.....	.....
Nov.	3	"	45537 Johnston & Johnston, Stephen, N.B.	3 "	15	.....	.....
"	7	"	45538 R. T. Mack, Fredericton, N.B.	3 "	30	Vendor .....	.....
"	15	"	45539 Fairweather Bros., Moncton, N.B.	3 "	30	.....	.....

DISTRICT OF QUEBEC—

Oct.	11	Spiritus Ætheris Nitrosi.	36993 J. B. Giroux, 385 Rue St. Joseph, Quebec.	3 ozs.	35	.....	.....
"	11	"	36994 Alphonse Martineau, 734 Rue St. Valier, Quebec.	3 "	25	.....	.....
"	11	"	36995 Joseph Masson, 808 Rue St. Valier, Quebec.	3 "	25	.....	.....
"	11	"	36996 L. E. Martel, 79 Rue St. Joseph, Quebec.	3 "	30	.....	.....
"	11	"	36997 Estate G. P. Plamondon, 122 Rue St. Joseph, Quebec.	3 "	30	.....	.....



SESSIONAL PAPER No. 14

SPIRITUS ÆTHERIS NITROSI.

Inspector's Report (Is not an expression of opinion.)	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and opinion of the Chief Analyst.
	Sp. gr. at 15 C.	Ratio of vol. of gas to vol. of liquid.	Ethyl Nitrite per cent by weight.		

R. J. WAUGH—INSPECTOR.

.....	0·8590	5·5	2·03	46731	Genuine.
.....	0·8443	5·6	2·08	46732	"
.....	0·8426	2·6	0·97	46733	Adulterated.
.....	0·8428	4·7	1·75	46734	Genuine.
.....	0·8438	3·0	1·12	46740	Adulterated.

WM. A. WEEKS—INSPECTOR.

	p. c.	p. c.	p. c.		
.....	0·8598	5·1	1·86	46101	Genuine.
Tincture obtained from Lymans, Ltd. & alcohol added by vendor to make the spirit.	0·8343	5·7	2·16	46102	"
.....	0·8580	5·5	2·02	46103	"
.....	0·8441	7·8	2·94	46104	"

J. C. FERGUSON—INSPECTOR.

.....	0·8471	7·5	2·79	45535	Genuine.
.....	0·8513	4·9	1·85	45536	"
.....	0·8269	10·9	4·23	45537	"
.....	0·8338	11·0	4·22	45538	"
.....	0·8449	2·6	0·99	45539	Adulterated.

F. X. W. E. BELAND—INSPECTOR.

.....	0·9509	0·0	0·0	36993	Adulterated. Contains no ethyl nitrite.
.....	0·8552	3·5	1·25	36994	Adulterated.
.....	0·8326	0·6	0·22	36995	"
.....	0·8251	0·9	0·34	36996	"
.....	0·8560	1·5	0·54	36997	"



Date of Collection.	Nature of sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cts.	Manufacturer.	Furnisher.

DISTRICT OF ST. HYACINTHE—

1911.							
Oct. 26	Spiritus Ætheris Nitrosi.	1165	Dr. C. Verdon, Granby....	3 oz..	25		
Nov. 6	"	1166	F. F. Ansell, Sherbrooke..	3 "	30		
" 8	"	1167	Dr. C. A. Codere, Megan-tic.	3 "	30		
" 9	"	1168	Pharmacie Drolet.....	3 "	30		
" 10	"	1169	J. F. Flink, Rock Island..	3 "	24		Unknown

DISTRICT OF MONTREAL—

Oct. 16	Spiritus Ætheris Nitrosi.	40916	S. Moisan 661 St. Law- rence B, Montreal.	3 oz..	45		
" 16	"	40917	Myers Freeman, 43 St. Catherine St., west, Montreal.	3 "	30		
" 16	"	40918	B. Fox, St. Lawrence Boulevard, Montreal.	3 "	30		
" 16	"	40919	A. Lebeau, 465 St. James St., Montreal.	3 "	45		
" 16	"	40920	Standard Pharmacy, 549 St. James St., Montreal	3 "	25		

DISTRICT OF OTTAWA—

Oct. 10	Spiritus Ætheris Nitrosi.	49006	W. J. Hughes, Carleton Place.	3 oz..	30	Vendor	
" 14	"	49007	P. J. Nolan, Ottawa.	3 "	30	"	
" 16	"	49008	J. F. Patterson, Almonte.	3 "	30	Unknown	Unknown
" 24	"	49009	R. M. Arbuthnot, Ottawa.	3 "	30	Vendor	
" 26	"	49010	G. F. Brethour, Ottawa..	3 "	30	"	

DISTRICT OF KINGSTON—

Nov. 2	Spiritus Ætheris Nitrosi.	48549	C. S. Prouse, Kingston...	3 oz..	30		
" 2	"	48550	Geo. Mahood, "	3 "	25		
" 2	"	48551	W. W. Gibson, "	3 "	25	Vendor	
" 3	"	48552	L. T. Best, "	3 "	30		
" 3	"	48553	J. B. McLeod, "	3 "	40		



SESSIONAL PAPER No. 14

## SPIRITUS ÆTHERIS NITROSI.

Inspector's Report (Is not an expression of opinion.)	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 15°C.	Ratio of vol. of gas to vol. of liquid	Ethyl Nitrite per cent by weight.		

## J. C. ROULEAU, INSPECTOR.

.....	0.9101	0.0	0.0	1165	Adulterated. Contains no ethyl nitrite.
.....	0.8608	1.0	0.35	1166	Adulterated.
Prepared according to U.S. P.	0.8332	7.0	2.54	1167	Genuine.
.....	0.8618	4.1	1.43	1168	Adulterated.
.....	0.8276	9.6	3.53	1169	Genuine.

## J. J. COSTIGAN, INSPECTOR.

	p. c.	p. c.	p. c.		
.....	0.8531	2.5	0.93	40916	Adulterated.
.....	0.8262	7.7	2.92	40917	Genuine.
.....	0.8433	2.3	0.85	40918	Adulterated.
.....	0.8564	2.1	0.77	40919	"
.....	0.8686	2.5	0.91	40920	"

## J. A. RICKEY, INSPECTOR.

Made from concentrated spirit and alcohol.	0.8340	1.5	0.55	49006	Adulterated.
" " ..	0.9492	0.0	0.0	49007	" Contains no ethyl nitrite.
.....	0.8312	4.3	1.59	49008	Adulterated.
Made from concentrated spirit and alcohol.	0.8310	4.5	1.66	49009	" Slightly below standard limit.
" " ..	0.8391	0.0	0.0	49010	" Contains no ethyl nitrite.

## JAS. HOGAN, INSPECTOR.

.....	0.8422	4.3	1.58	48549	Adulterated.
.....	0.8541	23.8	8.60	48550	Genuine ; but too strong.
.....	0.8344	10.4	3.83	48551	"
.....	0.8433	3.7	1.35	48552	Adulterated.
.....	0.8291	10.5	3.90	48553	Genuine.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF TORONTO

1911.							
Oct. 16	Spiritus Ætheris Nitrosi.	49305	Blaicher & Reche, Main st., Hamilton.	3 oz.	25		
" 16	"	49306	T. F. O'Riley, 498 Queen st. East, Toronto.	3 "	25		
" 23	"	49307	T. F. & T. J. Brown, Orangeville.	3 "	25		
" 24	"	49308	Langs & Gilchrist, Owen Sound.	3 "	25		
Nov. 3	"	49309	Geo. Callard, Stouffville.	3 "	25		

DISTRICT OF LONDON

Oct. 17	Spiritus Ætheris Nitrosi.	47813	W. M. Mutton, Ridge town.	3 oz.	30		
" 17	"	47820	Bawder Drug Store, Ridge town.	3 "	24		
" 18	"	47837	W. H. Willson, Leamington.	3 "	40		
" 19	"	47847	T. J. Stillman, Essex.	3 "	30		
" 20	"	47854	A. J. McCall & Co., Chatham.	3 "	30		

DISTRICT OF MANITOBA—

Nov. 6	Spiritus Ætheris Nitrosi.	47453	St. John's Pharmacy, Winnipeg.	3 oz.	35	Vendors...	
" 6	"	47468	Lincoln Park Drug Co., Winnipeg.	3 "	45		
" 7	"	47470	Norwood Drug Co., Norwood Grove.	3 "	25	Unknown	Unknown
" 7	"	47471	W. G. Lang, Norwood Grove.	3 "	30	"	
" 9	"	47472	Elmwood Drug Store, (Elmwood), Winnipeg.	3 "	30	"	Unknown

DISTRICT OF CALGARY—

Nov. 8	Spiritus Ætheris Nitrosi.	44015	E. M. Cawker, Medicine Hat.	3 oz.	50		
" 9	"	44016	C. S. Pingle, Medicine Hat.	3 "	50	Vendor...	
" 9	"	44017	B. F. Souch, Medicine Hat.	3 "	50		
" 14	"	44018	Nat. Drug & Chem. Co., Calgary.	3 "	50		
" 14	"	44019	C. A. Wallace, Calgary.	3 "	50		



SESSIONAL PAPER No. 14

SPIRITUS ÆTHERIS NITROSI—Continued.

Inspector's Report. (Is not an expression of opinion).	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and Opinion of the Chief Analyst.
	Sp. gr. at 15°C.	Ratio of vol. of gas to vol. of liquid.	Ethyl Nitrite per cent by weight.		

H. J. DAGER, INSPECTOR.

	p. c.	p. c.	p. c.		
.....	0·8417	3·6	1·32	49305	Adulterated.
.....	0·8288	6·2	2·35	49306	Genuine.
.....	0·8260	7·3	2·76	49307	"
.....	0·8339	6·1	2·30	49308	"
.....	0·8520	4·4	1·60	49309	Adulterated.

JNO. TALBOT, INSPECTOR.

.....	0·8285	17·2	6·47	47813	Genuine ; too strong.
.....	0·8373	0·0	0·00	47820	Adulterated. Contains no ethyl nitrite.
.....	0·8250	8·4	3·16	47837	Genuine.
.....	·8413	66·4	24·55	47847	Genuine ; but too concentrated. Adulterated.
.....	0·8258	8·0	3·03	47854	Genuine.

A. C. LARIVIERE, INSPECTOR.

.....	0·8345	9·1	3·45	47453	Genuine.
.....	0·8265	7·5	2·85	47465	"
.....	0·8864	9·8	3·48	47470	"
.....	0·8858	6·9	2·44	47471	"
.....	0·8273	7·0	2·66	47472	"

R. W. FLETCHER, INSPECTOR.

.....	0·8492	5·7	2·14	44015	Genuine.
.....	0·8282	10·8	4·17	44016	"
.....	0·8512	2·2	0·79	44017	Adulterated.
.....	0·8466	4·5	1·69	44018	Adulterated ; slightly below standard limit.
.....	0·8654	....	trace.	44019	Adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF NELSON—

1911.							
Oct. 19	Spiritus Ætheris Nitrosi.	48445	McLean Drug & B. Co., Fernie, B.C.	3 ozs .	45		
" 19	" ..	48446	N. E. Suddaby, Fernie, B.C.	3 " .	30		
" 27	" ..	48451	Goodeve Bros., Rossland, B.C.	3 " .	45		
" 28	" ..	48484	Canada Drug & B. Co., Nelson, B.C.	3 " .	25		
" 28	" ..	48486	Poole Drug Co., Nelson, B.C.	3 " .	40		

DISTRICT OF VANCOUVER—

Oct. 17	Spiritus Ætheris Nitrosi.	38205	W. E. Almas, Pender St., Vancouver.	3 ozs .	45		
" 17	" ..	38206	Manhattan Pharmacy, Robson St., Vancouver.	3 " .	75		
" 17	" ..	38207	Le Patourel & McRae, Granville St., Vancouver	3 " .	50		
" 17	" ..	38208	L. G. Henderson, Granville St., Vancouver.	3 " .	50		
" 18	" ..	35209	Ferguson's Drug Store, Granville St., Vancouver	3 " .	75		

DISTRICT OF VICTORIA—

Nov. 20	Spiritus Ætheris Nitrosi.	47671	W. Jackson & Co., Victoria.	3 ozs .	35		
" 20	" ..	47672	Hall & Co., Victoria.....	3 " .	35		
" 22	" ..	47673	W. S. Terry, Victoria....	3 " .	35		
" 22	" ..	47674	Ivil's Pharmacy, Victoria	3 " .	35		
" 22	" ..	47675	F. J. Williams, Victoria..	3 " .	35		



## SESSIONAL PAPER No. 14

## SPIRITUS ÆTHERIS NITROSI.

Inspector's Report (Is not an expression of opinion.)	RESULTS OF ANALYSIS.			No. of Sample.	Remarks and opinion of the Chief Analyst.
	Sp. gr. at 15 C.	Ratio of vol. of gas to vol. of liquid.	Ethyl Nitrite per cent by weight.		

## THOS. PARKER, INSPECTOR.

	p. c.	p. c.	p. c.		
.....	0·8266	5·2	2·02	48445	Genuine.
.....	0·8568	3·4	1·24	48446	Adulterated.
.....	0·9047	5·6	1·91	48451	Genuine.
.....	0·8601	9·4	3·37	48484	"
.....	0·8237	1·5	0·55	48486	Adulterated

## J. F. POWER, INSPECTOR.

Made from compound...	0·8295	8·3	3·10	38205	Genuine.
" " ..	0·8273	7·5	2·83	38206	"
.....	0·8417	3·9	1·51	38207	Adulterated.
.....	0·8316	8·8	3·30	38208	Genuine.
.....	0·8399	6·5	2·42	38209	"

## D. O'SULLIVAN, INSPECTOR.

.....	0·8723	2·3	0·86	47671	Adulterated.
.....	0·8441	4·8	1·80	47672	Genuine.
.....	0·8266	9·4	3·63	47673	"
.....	0·8273	6·0	2·33	47674	"
.....	0·8284	8·9	3·43	47675	"



## APPENDIX K.

## BULLETIN No. 235.—VINEGARS.

OTTAWA, February 17, 1912.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I have the honour to report upon 151 samples of vinegars, collected throughout the Dominion in October of last year. This collection may be regarded as supplementary to that of October, 1910, reported in Bulletin No. 223; the greater part of which was destroyed by the fire of January, 1911.

These collections were made with the special object of ascertaining whether or not certain proposed definitions of and standards for vinegar could be enforced to the advantage of the consumer. Our inspectors were particularly instructed to note the specific name under which vinegar is sold. So far as this report goes, it shows that so-called Wine or White Wine vinegars are most in demand, 61 samples, or 40 per cent of the collection being sold as Wine vinegar; 46 samples constituting 30 per cent of the collection are sold as malt vinegars, and 23 samples (16 per cent) as Cider vinegar.

Twenty-one (21) samples are sold simply as vinegar, without any specific claim to origin or character.

These three classes of vinegars have come to be so generally recognized, that it appears to be necessary, in the consumers' interest, to define them accurately and distinctively, if this be possible.

Vinegar is at present defined in the fifth schedule to the Adulteration Act as follows:—'A more or less coloured liquid consisting essentially of impure, dilute acetic acid, obtained by the oxidation of wine, beer, cider or other alcoholic liquid.

This conception of vinegar has evident regard to the article as a fermentation product from wine (*Vin-Aigre*), or other alcohol containing liquid. The word *impure* is not intended to convey any idea of an objectionable character, but is merely a way of stating that the acetic acid is accompanied by other matters, legitimately present, produced co-ordinately with the acetic acid by the methods described. As a matter of fact, it is to these associated substances, or congeners, that the distinctive flavour of vinegar is due. There has grown up, in recent years, a demand for the recognition of a diluted acetic acid, artificially flavoured, as vinegar. This modern innovation is clearly a result of the cheap production of acetic acid by a method which does not involve fermentation with *mycoderma aceti*. Acetic acid is now made commercially as a product of the destructive distillation of wood. Since acetic acid is the most important component of vinegar, why may not refined acetic acid, no matter what its origin, be employed in vinegar manufacture? If rectified spirits may be used in the manufacture of whiskey, there would seem to be no valid reason for



## SESSIONAL PAPER No. 14

condemning refined acetic acid as a basis for vinegar. Just as the German, or Quick vinegar process was, in 1823, looked upon as an improvement upon the older methods of spontaneous souring, so may not the obtaining of acetic acid from other sources than alcohol be regarded as a further improvement in vinegar production?

In the latest (Eleventh) edition of the *Encyclopædia Britannica*, vinegar is defined as 'A dilute solution of impure acetic acid, prepared by the acetous fermentation of alcohol, or of such substances, which yield alcohol when suitably decomposed (ordinary vinegar), or obtained from the products resulting on the dry distillation of wood (wood vinegar).' The following explanation is given: 'Ordinary or table vinegars, which contain in addition to acetic acid, small quantities of alcohol, higher acids such as tartaric and succinic, various esters, albuminous substances, &c., are produced solely by acetous fermentation, wood vinegar being only employed in certain arts.' 'Wood vinegar is not used in cooking, as it lacks those substances which render ordinary vinegar palatable.'

So far as ordinary or table vinegars are concerned, this definition is in harmony with the present Canadian standards for vinegar.

If, however, the only difference between pure dilute acetic acid, and true vinegar, is the absence of flavouring matter in the former, would it not be possible to make a satisfactory artificial vinegar, fulfilling every requisite of healthfulness, by adding to, pure dilute acetic acid, the necessary flavours?

That the question asked is of importance appears from the facts that (1) the Adulteration Act is not intended to handicap the manufacture and sale of cheap foods so long as these are wholesome; (2) it is well known that much of the vinegar on the market is actually made in whole or part, from acetic acid, without acknowledgment of the fact; (3) it is difficult, or even impossible, by chemical analysis to detect small additions of acetic acid to fermentation vinegars. Hence the necessity of establishing definite limits of variation for the different species of vinegar found in the market.

## CIDER VINEGAR.

Standards have been fixed for this variety of vinegar by the Department of Agriculture at Washington, as follows:—

- a. It is levorotatory.
- b. It contains not less than 4 grams acetic acid in 100cc.
- c. It contains not less than 1.6 grams apple solids in 100cc.
- d. Reducing sugars do not exceed 50 per cent of the weight of these solids.
- e. Apple ash not less than 0.25 gram per 100cc.
- f. Phosphoric acid ( $P_2O_5$ ) not less than 10 mgr. in water soluble ash from 100cc. vinegar.
- g. Alkalinity of soluble ash from 100cc., not less than 30cc. deci-normal.

Although I am not aware that the datum has been formally established, it would appear from the findings in U.S.A. vs. One hundred barrels vinegar (Notice of Judgment No. 1159) that Cider vinegar should have a glycerin content between 0.24 and 0.46 per 100cc.

Qualitative tests, such as the character of the residual solids and the ash, with regard to potash content, colour, viscosity, odour, solubility, &c., are more or less characteristic. Cider vinegars also give a decided precipitate with lead acetate.







## SESSIONAL PAPER No. 14

adoption in Canada. But nothing known to me regarding Malt vinegars, leads me to think these standards unreasonable. I propose to interpret by them the results of analysis of 46 samples, sold as Malt vinegar, in October last, and reported herein.

In addition to the requirements of the above standards, the annexed tables include the amounts of soluble ash; and of total phosphoric acid; as well as the qualitative determination of chlorides and phosphates, and of the precipitate obtained with lead acetate. These data are believed to possess value in judging the character of the article, inasmuch as Spirit vinegars give but slight precipitates with lead, and only traces of chlorides or sulphates.

By application of the quoted standards, I am able to classify 46 samples sold as Malt vinegar, as follows:—

	Samples.
Genuine.. . . .	24
Doubtful.. . . .	5
Imitation.. . . .	17
	—
Total.. . . .	46

Twenty-four samples are judged to be genuine from the fact that they answer to all but one or two of the constants suggested as applicable to Malt vinegar. It is important to ascertain where and to what extent, deviation from these constants has been found in samples which, upon the whole results of analysis, are judged to be genuine. In the following synopsis of the 24 samples, I have indicated the constants which fail to be met by each sample:—

No. 46724.....	Solids.....	Sol.....	P <sub>2</sub> O <sub>5</sub> .....	
" 46725.....				
" 46729.....	Alkalinity.....	Sol.....	P <sub>2</sub> O <sub>5</sub> .....	
" 46094.....	".....	".....	".....	
" 46099.....				
" 1395.....				Lead Precipitate.
" 49026.....				
" 49029.....	Alkalinity.....	Sol.....	P <sub>2</sub> O <sub>5</sub> .....	
" 47833.....	".....	".....	".....	
" 41010.....	".....	".....	".....	
" 38216.....	".....	".....	".....	
" 38217.....				
" 38218.....	Solids.....			
" 38221.....	Alkalinity.....	Sol.....	P <sub>2</sub> O <sub>5</sub> .....	
" 38223.....	Solids.....			
" 38224.....				
" 47631.....	Solids.....			
" 47632.....	Alkalinity.....	Sol.....	P <sub>2</sub> O <sub>5</sub> .....	
" 47634.....		".....	".....	Lead Precipitate.
" 47635.....				
" 47637.....				
" 47639.....	Solids.....			
" 47640.....	".....	".....	P <sub>2</sub> O <sub>5</sub> .....	
" 49023.....	Solids.....	".....		

Of 24 samples of Malt Vinegar believed to be genuine,  
 Solids are less than 2 per cent in 6 samples.  
 Alkalinity of sol. ash, less than 4cc. N/10 in 10 samples.  
 Soluble P<sub>2</sub>O<sub>5</sub>, less than 9 mgr. in 11 samples.  
 Lead precipitate not copious in 2 samples.

Only 7 samples meet every requirement of the proposed standards.

These results indicate that the standards for soluble phosphoric acid and for alkalinity of soluble ash are probably too high; that solids may be slightly less than 2 per cent in Malt vinegar, and that a copious lead precipitate may not invariably be obtained.



The solids actually present in 6 samples containing less than 2 per cent are 1.720; 1.712; 1.748; 1.810; 1.830; 1.530—mean value, 1.725 per cent.

The alkalinity of soluble ash in 10 samples showing less than 4cc. N/10 per 100cc. is as follows:—

0.8, 1.4, 1.0, 1.2, 1.4, 2.4, 1.2, 1.0, 1.2, 2.8, which would imply that the alkalinity number is of much less importance in defining Malt vinegar than has been supposed. In several cases this number has greatly exceeded 4cc. N/10, as in No. 46725 (10.4); 46099 (9.6); 1395 (9.8); 38218 (10.0); 47639 (10.0).

WINE VINEGARS.

As the name vinegar implies, all vinegars were originally Wine vinegars. Vinegar produced by the souring of wine is still the most important variety of this article in wine growing countries. It may be made from either red or white wine, and is known as Red Wine vinegar or White Wine vinegar respectively. The latter variety is usually preferred.

The subjoined results of analysis for genuine Wine vinegars are from the following sources:

- I. König-Zusammensetzung, Band I., S. 1447. Mean results for a large number of samples.
- II. Twenty-two samples, analysed by the Municipal Laboratory in Paris, quoted by Leach, Food Inspection and Analysis, p. 762.
- III. Red Wine vinegar (Weigmann), Leach, loc. cit.

	I.	II.	III.
Specific Gravity.....	1.0228	1.0175	1.0143
Acetic Acid per cent .....	5.07	7.38	7.79
Extract (Solids).....	4.03	1.93	0.863
Alcohol.....	1.80		1.19
Bitartrate of Potash. ....	0.184	0.170	0.057
Sugars .....	2.09	0.220	
Glycerin.....	0.507		0.141
Ash.....	0.391	0.320	0.118
Phosphoric Acid .....	0.053		0.012

The Second International Congress for the Repression of Frauds, held in Paris, October, 1909, defined Wine vinegar as exclusively the product of the acetous fermentation of wine.

It is quite evident that Wine vinegar should not be confounded with Spirit vinegar. This last is the product of the acetous fermentation of diluted alcohol; and should be distinctively named. It appears, from the present report, that most of the so-called White Wine vinegar sold in Canada is really Spirit vinegar, being made by the acetous fermentation of distilled spirit. This is evident from the low solids and ash, as well as from other constants. The results of examination of 61 samples sold as Wine vinegar may be summarized thus:—

	Samples.
Genuine Wine vinegar.. . . .	1
Spirit vinegar.. . . .	52
Acetic Acid vinegars.. . . .	6
Samples lost.. . . .	2
	—
	61



## SESSIONAL PAPER No. 14

As to what should be regarded as constants for Spirit vinegar, we have not sufficiently numerous analyses of the certified article to make a definite ruling. Twelve samples analysed in the Municipal Laboratory of Paris gave as follows:—

	Sp. Gravity.	Solids.	Ash.	Acidity.
Maximum .....	1·0131	0·16	·09	7·98
Minimum .....	1·0082	0·07	·04	4·98
Mean .....	1·0100	0·35	trace.	6·34

Rothenbach's test for fermented vinegars (*Zeitschrift für Angewandte Chemie*, 1906, 1610) has been applied to these vinegars, with the results given under Iodine test.

Twenty-one (21) samples are sold without specific claim, and simply as vinegar.

Of this number 18 are found to be spirit vinegars, 3 of them being apparently fortified by addition of acetic acid. Two are imitation Malt vinegars, and one is evidently made from acetic acid only.

In the absence of standards for the article, I am unable to designate any of the 151 samples herein reported, as adulterated, except in so far as they fail to meet the requirements of the fifth schedule to the Adulteration Act. Even here it is open to question whether a fermented vinegar to which acetic acid has been added, would be held adulterated by the courts. It might still be regarded as essentially a fermentation product. The report is intended to show what vinegar is, as sold in Canada; and to furnish material for the establishing of standards for the article. A scheme of standards was outlined in Bulletin 223 (April, 1911), and it is hoped that the information herein given may enable your Advisory Board to reach conclusions in this matter.

I beg to recommend publication of this report as Bulletin 235.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—

1911								
Oct. 25	Vinegar...	46721	National Drug & Chem. Co., Halifax, N.S.	1½ bt..	15	Vendors .....		Sovereign Brand White wine.
" 27	"	46726	Wm. Moore, Halifax, N.S.	1½ "	10	J. E. Gass, Halifax, N.S.	Mfr.....	White wine....
Nov. 17	"	46730	Coleman & Eisner, Dartmouth, N.S.	1½ "	8	M. W. Greaves & Co., Bridge-town.	Nickerson & Hart, Halifax, N.S.	White wine....

DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 16	Vinegar..	46091	Jas. P. Duffy, Charlottetown, P.E.I.	1 qt..	10	C. La Riviere, Bordeaux.		White wine...
" 16	"	46092	John McKenna, Charlottetown, P.E.I.	1 "	15	Hudon Herbert et Cie, Montreal.		"
" 17	"	46095	E. Toombs, Charlottetown, P.E.I.	1 "	15		N. Rathenbury Charlotte-town, P.E.I.	"
" 21	"	46097	R. T. Holman, Ltd., Summerside, P.E.I.	1 "	15	H. J. Heinz & Co., Pittsburg, Pa.		"
" 21	"	46098	Brace McKay & Co., Summerside, P.E.I.	1 "	20	E. M. Bollman, Bordeaux, France.		"
" 26	"	46100	E. J. Holman & Co., Charlotte-town, P.E.I.	1 "	10	McCready & Son, Ltd., St John, N.B.		"

DISTRICT OF NEW BRUNSWICK—

Oct. 14	Vinegar..	45525	James McCauley, St. John.	1 qt..	10		Northrop & Co. St. John, N.B.	White wine....
" 14	"	45527	W. A. Fairweather Co., Ltd., St. John.	1 "	10	Vendors .....		"
Nov. 3	"	45530	F. E. Rose, Stephen, N.B.	1 "	10	Thos. McCready & Son, St. John		"

DISTRICT OF QUEBEC—

Oct. 12	Vinegar...	36984	Cantin & Frere, 271 Rue St. Joseph, Quebec.	1 qt..	20	Heinz, Pittsburg, U.S.	Mfrs .....	Wine.....
" 13	"	36985	G. Gingras, Rue du Roi, Quebec.	1 "	25		J. B. Renaud & Cie.	"
" 13	"	36986	"	1 "	15	Gagnon & Garent	Mfrs.....	"
" 13	"	36989	W. Cantin, 133 rue du Pont Que	"	15	St. Lawrence Vinegar.	J. E. Letourneau.	"
" 19	"	36990	A. Pichette, Rue D'Orchester, Quebec.	1 "	20	"	J. B. Renaud & Cie.	"



SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

RESULTS OF ANALYSIS.								No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented vinegar.	Formic Acid			
Acidity as acetic.	Solids.	Ash.				Mgnes. per 100cc.	Pts. per 1000 of total acid		
R. J. WAUGH, INSPECTOR.									
5.16	0.188	0.043	Heavy trace.	None.....	Clear.....	28.4	5.51	46721	Made from acetic acid, at least in part. Doubtful.
4.65	0.011	0.002	Slight trace.	" .....	" .....	69.7	14.98	46726	Made from acetic acid. Adulterated.
4.32	0.097	0.015	"	Slight trace.	Ppt. ....	.....	.....	46730	Spirit vinegar.
WM. A. WEEKS, INSPECTOR.									
3.66	0.058	0.011	Slight trace.	Slight trace.	Ppt. ....	.....	.....	46091	Spirit vinegar.
5.34	0.330	0.080	Large amount.	Medium..	" . . . .	.....	.....	46092	"
3.66	0.146	0.020	Slight trace.	None....	"	.....	.....	46095	"
5.40	0.205	0.032	"	Trace.....	Slight ppt.	Trace.....	.....	46097	"
6.96	0.163	0.015	None. ...	None. ...	"	18.1	2.60	46098	Made from, or fortified by acetic acid. Doubtful.
4.71	0.104	0.015	Trace.....	Slight trace.	"	.....	..	46100	Spirit vinegar.
J. C. FERGUSON, INSPECTOR.									
3.48	0.070	0.014	Trace. ...	None.....	Slight ppt.	None....	..	45525	Spirit vinegar.
7.50	0.178	0.017	" .....	" .....	Heavy ppt.	Trace.....	..	45527	"
5.19	0.126	0.022	Medium..	" .....	Medium ppt.	0.6	0.13	45530	"
F. X. W. E. BELAND, INSPECTOR.									
5.28	0.155	0.032	Trace.....	None.....	Ppt.	.....	.....	36984	Spirit vinegar.
5.34	0.156	0.032	" . . .	Trace....	"	.....	.....	36985	"
4.62	0.057	0.018	None: . . .	None .....	Clear.....	37.8	8.18	36986	Made from acetic acid Adulterated.
5.97	0.391	0.032	" .....	Trace.....	.....	1.0	0.16	36989	Spirit vinegar.
7.14	0.178	0.013	Slight trace.	None.....	Ppt. ....	.....	.....	36990	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC—

1911.								
Oct. 19	Vinegar. .	36991	A. Pichette, 176 Rue Dorchester, Quebec.	1 qt. . .	15	Wilson, Lytle & Badgerow, Toronto.	Gagnon & Garent, Mfrs.	Wine.....
" 19	" ..	36992	Louis Jobin, 156 Rue Dorchester, Quebec.	1 " ..	16	St. Lawrence Vinegar.	.....	" .....

DISTRICT OF ST. HYACINTHE—

" 25	Vinegar. .	1390	L. Ed. Choquette, Farnham.	1 qt. . .	15	Wilson, Lytle & Badgerow, Toronto.	.....	White Wine....
" 26	" ..	1392	Monty frère, Granby.	1 " ..	10	Heinz, Leamington, Ont.	.....	" .....
" 26	" ..	1393	A. C. Gilmore, Waterloo.	1 " ..	5	.....	Hudon & Orsali, Montreal.	" .....
" 21	" ..	1398	E. Marchand, Nicolet.	1 " ..	5	.....	L. Chaput fils & Co., Montreal.	White Wine. Proof.

DISTRICT OF MONTREAL—

" 17	Vinegar. .	40906	Branet & Brayeur, 1135 St. Lawrence Bldv., Montreal.	1 qt. . .	15	.....	.....	White Wine....
" 17	" ..	40910	O. Sansregret, 50 Duluth Ave.	1 " ..	13	Lion Vinegar Co., Ltd.	.....	" .....

DISTRICT OF OTTAWA—

Oct. 10	Vinegar. .	49021	Bowland & McRostie, Carleton Place.	1 qt. .	10	Dom. Vinegar Works, Hamilton.	.....	XXX White Wine.
" 12	" ..	49022	J. K. Whitelaw, Arnprior.	1 " .	10	Wilson Lytle & Badgerow, Toronto.	.....	XX " ..
" 20	" ..	49025	J. T. Kearns, Chesterville.	1 " .	10	" ..	.....	White wine 83 grs.



## SESSIONAL PAPER No. 14

## VINEGAR (WHITE WINE).

RESULTS OF ANALYSIS.							No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Chlorides.	Sulphates.	Iodine test for fermented vinegar.	FORMIC ACID.		
Acidity as acetic.	Solids.	Ash.				Mgms. per 100 cc.		

## F. X. W. E. BELAND, INSPECTOR.

5.37	0.518	0.038	Trace ...	None.....	.....	Trace ....	.....	36991	Spirit vinegar.
5.13	0.412	0.032	" .....	" .....	.....	0.9	0.17	36992	"

## J. C. ROULEAU, INSPECTOR.

4.14	0.093	0.016	Trace ....	Slight trace.	Ppt .....	.....	.....	1390	Spirit vinegar.
5.28	0.215	0.039	Medium..	"	" .....	.....	.....	1392	"
7.29	0.128	0.024	Slight trace.	"	" .....	.....	.....	1393	"
8.01	0.253	0.024	"	None....	" .....	.....	.....	1398	"

## J. J. COSTIGAN, INSPECTOR.

7.14	0.197	0.045	None.....	None.....	Ppt ....	0.5	.....	40906	Spirit vinegar.
7.05	0.185	0.017	" .....	" .....	" .....	0.5	0.07	40910	"

## J. A. RICKEY, INSPECTOR.

5.16	0.117	0.022	none. ....	none. ....	ppt. ....	trace.....	.....	49021	Spirit vinegar.
4.23	0.077	0.020	slight trace.	slight trace.	" .....	" .....	.....	49022	"
4.71	0.095	0.025	" ..	" ..	" .....	" .....	.....	49025	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF KINGSTON—

1911.								
Nov.	1	Vinegar..	48537 W. E. Hopkin- son, Kingston.	1 qt..	10	.....	Fenwick Hen- dry Co., Kingston.	White wine. ...
"	1	" ..	48538 Geo. Gibson, Kingston.	1 "	10	D. B. Murray, Kingston.	.....	" ..
"	1	" ..	48539 L. W. Murphy, Kingston.	1 "	10	" ..	.....	" ..
"	1	" ..	48540 J. Cullen, Kings- ton.	1 "	10	" ..	.....	" ..
"	1	" ..	48541 C. Saunders, Kingston.	1 "	10	Heinz, Toronto..	.....	" ..
"	1	" ..	48542 C. H. Pickering, Kingston.	1 "	10	Whitby Fruit Vinegar Co.	.....	" ..
"	1	" ..	48544 E. S. Suddard, Kingston.	1 "	10	D. B. Murray, Kingston.	.....	" ..
"	1	" ..	48545 D. Couper, Kingston.	1 "	10	" ..	.....	" ..
"	2	" ..	48546 D. B. Murray, Kingston.	1 "	10	Vendor.....	.....	" ..
"	2	" ..	48547 Anderson Bros., Kingston.	1 "	10	D. B. Murray, Kingston.	.....	" ..

DISTRICT OF TORONTO—

Oct.	16	Vinegar..	47355 Dom. Vinegar Works, Hamil- ton.	1 qt..	10	Vendors.....	.....	XXX White Wine.
"	16	" ..	47356 ImperialVinegar & PicklingCo., Ltd., Hamilton	1 "	10	" ..	.....	" ..
"	19	" ..	47357 TheWilson Lytle Badgerow Co., Ltd., Toronto.	1 "	10	" ..	.....	" ..
"	19	" ..	47359 The Queen City Vinegar Co., Ltd., Toronto.	1 "	10	" ..	.....	" ..
Nov.	3	" ..	47384 The Stouffville Cider & Vine- gar Co., Ltd., Stouffville.	1 "	10	" ..	.....	" ..

DISTRICT OF LONDON—

Oct.	16	Vinegar..	47804 Chute & Smith, St. Thomas.	1 qt.	10	Unknown .....	.....	Wine vinegar..
"	17	" ..	47822 Clark & Sons, Ridgetown.	1 "	5	S. Allen, Nor- wich.	.....	White wine vine- gar.
"	19	" ..	47838 Miller & Wigle, Essex.	1 "	10	Unknown .....	.....	" ..
"	19	" ..	47839 A. Raines, Essex	1 "	10	S. Allen, Nor- wich.	.....	" ..
"	19	" ..	47841 O. H. Bricker, Essex.	1 "	10	" ..	.....	" ..
19	19	" ..	47848 Miller & Wigle, Essex.	1 "	10	Unknown .....	.....	" ..



SESSIONAL PAPER No. 14  
VINEGAR (WHITE WINE).

RESULTS OF ANALYSIS.										No. of Sample.	Remarks and opinion of the Chief Analyst.
Gms. per 100 cc.			Chlorides.	Sulphates.	Iodine test for fermented vinegar.	Formic Acid.					
Acidity as Acetic.	Solids.	Ash.				Mgms. in 100 cc.	Parts per 1000 of total acid				

JAS. HOGAN, INSPECTOR.

.....	.....	.....	.....	.....	.....	.....	.....	*	
.....	.....	.....	.....	.....	.....	.....	.....	48537	Samples lost.
5.37	0.104	0.018	trace.....	none . . .	ppt. ....	.....	.....	48538	Spirit vinegar.
5.07	0.095	0.019	" .....	slight trace.	" .....	.....	.....	48539	"
5.22	0.151	0.018	" .....	trace. ....	" .....	.....	.....	48540	"
5.31	0.145	0.034	" .....	none. ....	" .....	.....	.....	48541	"
3.18	0.145	0.028	" .....	trace.....	" .....	.....	.....	48542	"
5.52	0.176	0.020	" .....	slight trace.	" .....	.....	.....	48544	"
6.36	0.088	0.015	" .....	trace.....	" .....	.....	.....	48545	"
11.31	0.198	0.017	" .....	slight trace.	" .....	.....	.....	48546	" above vine-
5.55	0.103	0.020	" .....	" .....	" .....	.....	.....	48547	gar strength in acetic acid. Spirit vinegar.

H. J. DAGER, INSPECTOR.

5.25	0.111	0.022	trace.....	slight trace.	slight ppt.	none . . .	.....	47355	Spirit vinegar.
5.34	0.107	0.020	" .....	" .....	" .....	.....	.....	47356	"
5.37	0.094	0.019	" .....	" .....	" .....	.....	.....	47357	"
5.25	0.117	0.020	" .....	" .....	" .....	none. ....	.....	47359	"
5.10	0.127	0.023	" .....	trace.....	ppt. ....	.....	.....	47384	"

JNO. TALBOT, INSPECTOR.

4.68	0.362	0.047	trace.....	slight trace.	ppt. ....	trace. ....	.....	47804	Spirit vinegar.
5.61	0.140	0.030	" .....	" .....	" .....	" .....	.....	47822	"
.....	.....	.....	.....	.....	.....	.....	.....	*47838	Samples lost.
4.11	0.145	0.037	trace.. ...	trace.....	ppt. . .	trace.....	.....	47839	Spirit vinegar.
5.43	0.102	0.027	" .....	none .....	" .....	" .....	.....	47841	"
3.26	0.264	0.070	" .....	" .....	very slight ppt.	" .....	.....	47848	"

\* Both samples broken in transit.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1911.								
Oct. 24	Vinegar...	47418	The Blackwood, Ltd., Winnip'g	1 qt.	Nil.	Vendors.....		Proof—White wine.
" 24	" ..	48420	The Dyson Co., Winnipeg.	1 "	"	" .....		White wine spirits.
" 26	" ..	47427	B. J. Wray, Winnipeg.	1 "	"	" .....		White wine proof.

DISTRICT OF CALGARY—

Nov. 8	Vinegar...	44066	Lepage Bros., Medicine Hat.	1 qt.	15	Wilson, Lytle & Badgerow, Toronto.		White wine.
" 8	" ..	44907	L. B. Cochrane, Medicine Hat.	1 "	15	" .....		" ..
" 9	" ..	44008	H. W. Ireland & Co., Med. Hat.	1 "	20	The Dyson Co., Winnipeg.		" ..
" 20	" ..	44010½	R. J. Frizzle, Calgary.	1 "	25	" .....		" ..
" 20	" ..	44012	Jenkins & Co., Calgary.	1 "	25	Georgeson & Co., Calgary.		" ..

DISTRICT OF NELSON—

Oct. 19	Vinegar...	48434	Trites Wood Co., Fernie, B.C.	3 bots.	15	Dyson & Co., Winnipeg.		Wine vinegar ..
" 19	" ..	48443	Fernie Co-operative Store, Fernie, B.C.	3 "	15	Imperial Vinegar Co., Hamilton.		" ..
" 27	" ..	48458	Hunter Bros., Rossland, B.C.	24 oz.	15	Wilson, Lytle & Badgerow, Toronto.		" ..

DISTRICT OF VICTORIA—

Nov. 9	Vinegar...	47636	Wm. B. Hall, Victoria.	1 qt.	25	R. J. Whitlock, Los Angeles, Cal.		Good Judgment Brand. Genuine Wine Vinegar.
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SESSIONAL PAPER No. 14

VINEGAR (WHITE WINE).

RESULTS OF ANALYSIS.									
Gms. per 100 cc.			Chlorides.	Sulphates.	Iodine test for fer- mented vinegar.	Formic Acid.		No. of Sample.	Remarks and Opinion of the Chief Analyst.
Acidity as Acetic.	Solids.	Ash.				Mgms. in 100 cc.	Parts per 1000 of total acid.		

A. C. LARIVIÈRE, INSPECTOR.

6.48	0.473	0.127	large.....	medium ..	very slight ppt. ....	39.5	6.10	47418	Made in part from acetic acid. Doubtful.
6.60	0.352	0.100	" .....	" ..	ppt. ....	1.1	0.16	47420	Spirit vinegar.
6.63	0.137	0.090	" .....	" ..	slight ppt.	45.9	6.92	47427	Made from acetic acid adul- terated.

R. W. FLETCHER, INSPECTOR.

5.85	0.148	0.023	slight trace.	trace.....	ppt .....	.....	.....	44006	Spirit vinegar.
10.74	0.401	0.038	" ..	slight trace.	" .....	.....	.....	44007	" above vinegar strength.
10.56	0.532	0.167	large.....	medium ..	" .....	.....	.....	44008	Spirit vinegar, above vin- egar strength.
5.43	0.302	0.100	large amt.	trace.....	" ..	.....	.....	44010½	Spirit vinegar.
3.96	0.318	0.044	medium ..	medium ..	" .....	.....	.....	44012	"

THOS. PARKER, INSPECTOR.

10.17	0.480	0.105	large amt.	small amt.	heavy ppt.	1.1	0.11	48434	Spirit vinegar, above vin- egar strength.
8.85	0.225	0.031	trace.....	none. ....	" ..	1.4	0.16	48443	Spirit vinegar.
5.40	0.113	0.021	" .....	" .....	" ..	.....	.....	48458	"

D. O'SULLIVAN, INSPECTOR.

4.50	0.848	0.130	Trace.....	Trace.....	.....	.....	.....	47636	Genuine wine vinegar.
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\* Both samples broken in transit.



Date of Collect	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA--

1911.								
Oct. 27	Vinegar...	46724	Wentzells, Ltd., Halifax, N.S.	1½ qt.	6	Wilson, Lytle & Badgerow, Toronto.	Manufacturers	Sold as malt....
" 27	" ..	46725	E. W. Crease & Son, Halifax, N.S.	1½ "	9	.....	.....	" .....
Nov. 14	" ..	46727	De Wolfe & La- mont, Kent- ville, N.S.	1½ "	10	Wilson, Lytle & Badgerow, Toronto.	Manufacturers	Malt.....
" 17	" ..	46729	Jas. Scott & Co., Halifax, N.S.	1½ "	15	Robt. Burnett, London, Eng.	Manufacturer.	" .....

DISTRICT OF PRINCE EDWARD ISLAND--

Oct. 17	Vinegar...	46094	Beer & Goff, Ch. Town, P.E.I.	1 qt...	20	.....	Carvell, Bros., Ch. Town, P. E.I.	Malt.....
" 21	" ..	46096	D. McKenzie & Co., Kensing- ton, P.E.I.	1 " ..	15	McCreedy & Son, Ltd., St. John, N.B.	.....	" .....
" 26	" ..	46099	A. Gates & Co., Ch. Town, P. E.I.	1 " ..	16	Purnell's, Bris- tol, Eng.	.....	" .....

DISTRICT OF NEW BRUNSWICK--

Oct. 17	Vinegar...	45528	W. A. Fair- weather Co. Ltd., St. John.	1 qt...	10	Vendors.....	.....	Malt... ..
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DISTRICT OF QUEBEC--

Oct. 12	Vinegar...	36983	Cantin et Frères, 271 rue St. Jo- seph, Québec.	1 qt...	20	Unknown. . .	Unknown....	Malt.....
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DISTRICT OF ST. HYACINTHE--

Nov. 7	Vinegar...	1395	A. S. Johnson, Thetford Mines	1 bot..	25	Cosse & Black well, England.	.....	Malt.....
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## SESSIONAL PAPER No. 14

## VINEGAR (MALT).

RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Soluble Ash.	Alkalinity of solu- ble ash ccs. <sup>N</sup> 10 acid per 100 cc.	Phosphates Mgms. P <sub>2</sub> S <sub>5</sub> per 100cc.		Chlorides.	Sulphates.	Lead Acetate Ppt.		
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.					

## R. J. WAUGH—INSPECTOR.

4.74	1.720	0.206	0.121	6.8	4.0	28.2	Medium	Trace...	Copious	46724	Genuine.—Solids & sol. $P_2O_5$ low.
4.59	2.514	0.300	0.204	10.4	17.6	28.4	"	" ..	"	46725	Genuine.
5.01	1.350	0.148	0.039	2.8	9.6	45.0	Trace...	" .	"	46727	Solids, ash, sol. ash, alkalinity are low. Doubtful.
5.25	2.993	0.363	0.219	0.8	trace	59.0	Medium	Large ..	"	46729	Genuine. Alkalinity & sol. $P_2O_5$ low.

## WM. A. WEEKS—INSPECTOR.

5.04	3.180	0.370	0.218	1.4	none	65.0	Medium	Large ..	Copious	46094	Genuine—Alkalinity & sol. $P_2O_5$ low.
4.71	0.675	0.040	0.023	1.4	2.0	8.0	Trace...	Trace...	Slight...	46096	Imitation malt vinegar.
4.74	2.546	0.246	0.156	9.6	23.2	28.4	Medium	Medium	Copious	46099	Genuine.

## J. C. FERGUSON—INSPECTOR.

4.98	2.165	0.185	0.087	3.6	12.0	29.6	Medium	Trace...	Medium	45528	Ash, soluble ash & alkalinity low. Doubtful.
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## F. X. W. E. BELAND—INSPECTOR.

2.04	3.490	0.537	0.326	1.6	2.6	85.2	Medium	Lge amt	Copious	36983	Acidity alkalinity & soluble $P_2O_5$ low.
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## J. C. ROULEAU—INSPECTOR.

5.58	2.058	0.320	0.201	9.8	31.2	46.8	Lge amt	Trace...	Medium	1395	Genuine; but lead ppte. low.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911.								
Oct. 13	Vinegar.	49023	A. Parkinson & Son, Kemptville.	1 qt..	13	Wilson, Lytle & Badgerow, Toronto.		Malt vinegar..
" 21	"	49026	D. A. Younghusband, Ottawa.	1 " ..	15	Purnells, Bristol, Eng.		" ..
" 25	"	49028	H. Armstrong, Bank St., Ottawa.	1 " ..	20		F. J. Castle Co., Ltd., Ottawa	" ..
" 26	"	49029	Goodall Bros., Ottawa.	1 " ..	20	Holbrooks, Ltd., London, Eng.		" ..

DISTRICT OF TORONTO—

Oct. 19	Vinegar.	47358	The Wilson-Lyttle Badgerow Co. Ltd., Toronto.	1 qt..	15	Vendors.....		Guaranteed absolutely pure Malt Vinegar. Brewed from pure barley malt. Made from malt alone.
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DISTRICT OF LONDON—

Oct. 18	Vinegar.	47833	R. T. Moran, Leamington.	1 qt..	20	Holbrook Ltd., London, Eng..		Pure Malt Vinegar.
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DISTRICT OF MANITOBA—

Oct. 18	Vinegar.	47423	Western Mercantile Co., Ltd., Winnipeg.	1 qt..	5	Unknown ....	Manufacturers	XXX Brown Vinegar.
" 26	"	47425	H. Logrenia, Winnipeg.	1 " ..	10	The Dyson Co., Winnipeg.	"	XXX Spirits Malt.
" 26	"	47426	W. H. Wright, Winnipeg.	1 " ..	5	The Blackwood, Ltd., Winnipeg	"	XXX Malt Vinegar.



SESSIONAL PAPER No. 14  
VINEGAR (MALT.)

RESULTS OF ANALYSIS.											No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Soluble ash.	Alkalinity of solu- ble ash ccs. $\frac{N}{10}$ acid for 100 cc.	Phosphates Mgms. $P_2O_5$ per 100 cc.		Chlorides.	Sulphates.	Lead acetate Ppt.			
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.						

J. A. RICKEY—INSPECTOR.

4.23	1.530	0.215	0.119	2.8	10.8	58.0	Medium	Trace...	Copious	49023	Genuine. Solids & alkalinity are low.
7.14	2.465	0.350	0.233	4.2	9.6	36.2	Lge acc.	" ..	"	49026	Genuine.
5.79	1.318	0.148	0.083	1.6	4.2	23.0	Medium	" ..	Medium	49028	Solids, ash, soluble ash, alkalinity & soluble $P_2O_5$ low. Doubtful.
5.34	2.786	0.324	0.197	1.0	1.6	51.4	"	Lge amt	Copious	49029	Genuine, but alkalinity & soluble $P_2O_5$ are low.

H. J. DAGER, INSPECTOR.

4.83	1.440	0.194	0.124	1.8	2.0	29.2	Small amount.	Medium	Medium	47358	Solids, soluble ash, alkalinity and soluble $P_2O_5$ low; lead-precipitate low Doubtful.
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JNO. TALBOT, INSPECTOR.

5.43	2.900	0.378	0.226	1.2	1.8	62.8	Small amount.	Large amount.	Copious.	47833	Genuine, but alkalinity and soluble $P_2O_5$ low.
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A. C. LARIVIERE, INSPECTOR.

2.82	0.708	0.115	0.096	1.8	None.	Trace.	Small.	Trace.	Trace.	47423	Imitation malt vinegar.
5.16	0.515	0.130	0.110	2.4	"	2.0	Medium	"	None.	47425	" "
3.21	0.716	0.106	0.088	1.6	"	Trace.	Small.	"	"	47426	" "



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911.								
Nov. 9	Vinegar.	44009	Spencer & Todd, Medicine Hat.	1 qt..	15	Wilson, Lytle & Badgerow, Toronto.		Malt.
" 9	"	44010	Hewitt & Armstrong, Medicine Hat.	1 " ..	15	Holbrook & Co., London, Eng.		"
" 20	"	44011	C. Bradley, Calgary.	1 " ..	25	Lytle & Badgerow, Toronto		"
" 20	"	44013	Summers & Comfoot, Calgary.	1 " ..	25	Wilson, Lytle & Badgerow, Toronto.		"
" 20	"	44014	A. E. Green, Calgary.	1 " ..	25	The Dyson Co., Winnipeg.		"

DISTRICT OF NELSON—

Oct. 19	Vinegar.	48430	Crow's Nest Trading Co., Fernie, B.C.	3 bots.	15	White Star Mfg Co., Winnipeg.		Malt Vinegar.
" 19	"	48433	Trites Wood Co., Fernie, B.C.	3 " ..	15	Dyson & Co., Winnipeg.		"
" 19	"	48444	Fernie Co-operative Store, Fernie, B.C.	3 " ..	15	"		"
" 27	"	48453	Union Co-operative Association, Rossland, B.C.	24 oz.	15	Wilson, Lytle & Badgerow, Toronto.		"
" 27	"	48459	Hunter Bros., Rossland, B.C.	24 " ..	15	"		"
" 28	"	48480	A. S. Horswill, Nelson, B.C.	24 " ..	15	A. Macdonald & Co., Winnipeg.		"

DISTRICT OF VANCOUVER—

Oct. 18	Vinegar.	38215	David Spencer, Vancouver.	1 qt..	15	W. K. Houston Victoria.		Labelled Malt Vinegar absolutely pure.
" 18	"	38216	H. A. Edgett, Hastings St., Vancouver.	1 " ..	25	Grimble Co., London, Eng.		Malt Vinegar...
" 18	"	38217	Foran Bros, Carrall St., Vancouver.	1 " ..	25	Fardons Ltd., Birmingham, Eng.		Malt Vinegar unsurpassed for purity and flavour.
18	"	38218	F. Filion, Carrall St., Vancouver	1 " ..	25	Crosse & Blackwell, London, Eng.		Made from Malt and free from all mineral acids.



SESSIONAL PAPER No. 14

## VINEGAR (MALT).

RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Soluble Ash.	Alkalinity of solu- ble ash ccs. $\frac{N}{10}$ acid per 100cc.	Phosphates Mgms. $P_2O_5$ per 100cc.		Chlorides.	Sulphates.	Lead Acetate Ppt.		
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.					

R. W. FLETCHER, INSPECTOR.

10.35	0.756	0.044	0.016	3.7	Trace.	2.0	None.	None.	None.	44009	Imitation malt vinegar. Acidity very high.
4.95	2.722	0.304	0.168	1.4	2.0	55.2	Trace.	Medium	Copious.	44010	Genuine, but alkalinity and soluble $P_2O_5$ are low.
9.06	0.665	0.027	0.013	2.6	None.	4.0	None.	None.	None	44011	Imitation malt vinegar. Acidity high.
10.08	0.916	0.040	0.022	4.0	"	3.2	"	"	"	44013	" "
11.70	0.578	0.044	0.027	3.0	"	2.8	Slight trace.	Slight trace.	"	44014	" "

THOS. PARKER, INSPECT R.

10.80	0.650	0.042	0.032	3.2	None.	2.2	Slight trace.	None.	None.	48430	Imitation malt vinegar. Acidity high
9.90	0.756	0.120	0.095	2.2	"	4.6	Medium	Trace.	Slight.	48433	" "
10.71	1.490	0.135	0.101	3.2	"	4.2	"	"	Trace.	48444	" "
9.69	0.878	0.074	0.061	5.6	"	3.2	Small.	None.	None.	48453	" "
5.16	0.472	0.055	0.031	3.0	"	2.4	Trace.	"	"	48459	Imitation malt vinegar.
8.82	0.760	0.108	0.085	3.0	"	1.8	Medium	Trace.	"	48480	Imitation malt vinegar. Acidity high.

J. F. POWER—INSPECTOR.

4.50	0.310	0.014	0.010	1.0	none.	trace.	Slight trace.	None...	None...	38215	Imitation malt vinegar.
4.92	2.100	0.346	0.204	2.4	"	40.8	Large ..	Large ..	Copious	38216	Genuine. Alkalinity and soluble $P_2O_5$ low.
5.19	3.020	0.325	0.186	6.4	26.1	55.6	" ..	Medium	"	38217	Genuine.
5.76	1.712	0.285	0.160	10.0	31.6	48.0	" ..	"	"	38218	Genuine. Solids low.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1911.								
Oct. 19	Vinegar.	38221	A. & C. Grocery, Granville St., Vancouver.	1 qt..	25	Holbrook & Co., London, Eng.		Malt Vinegar Purity and Excellence guaranteed.
" 19	"	38222	London Grocery Co., City Br'ch Vancouver.	1 " ..	15	Pendray & Co., Victoria, B.C.		Labelled English Malt Vinegar A pure and healthful article for the table
" 19	"	38223	H. H. Owens, Granville, St., Vancouver.	1 " ..	25	White Cottells, London, Eng.		Malt Vinegar. This vinegar is absolutely pure.
" 19	"	38224	W. H. Walsh, Seymour and Davie, Vancouver.	1 " ..	20	Thos. W. Lipton, London, Eng.		Pure Malt Vinegar.

DISTRICT OF VICTORIA—

Oct. 25	Vinegar.	47631	Windsor Grocery Co., Victoria, B.C.	1 qt..	25	White Cottells & Co., Camberwell, London, Eng.		Malt Vinegar...
" 25	"	47632	"	" ..	25	Grimble & Co., Cumberland Market, London, Eng.		"
" 26	"	47633	The West End Grocery Co., Ltd, Victoria, B.C.	" ..	15		W.K. Houston & Co., Victoria, B.C.	"
" 26	"	47634	"	" ..	25	John Stephens Sons & Co., Gloucester, Eng.		"
Nov. 9	"	47635	Copas & Young, Victoria, B.C.	" ..	25	Purnell & Panter Ltd., Bristol, Eng.		"
" 13	"	47637	Erskine & Co., Victoria, B.C.	" ..	35	H. J. Heinz, Pittsburg, P.		Pure Malt Vinegar.
" 15	"	47639	Dixie H. Ross & Co., Victoria, B.C.	" ..	25	Crosse & Blackwell, London, Eng.		"
" 15	"	47640	Harrison and McDonald, Victoria, B.C.	" ..	25	Holbrook & Co., London, Eng.		"



SESSIONAL PAPER No. 14

## VINEGAR (MALT).

RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Soluble Ash.	Alkalinity of solu- ble ash ccs. $\frac{N}{10}$ acid per 100cc.	Phosphates Mgms. $P_2O_5$ per 100cc.		Chlorides.	Sulphates.	Lead Acetate Ppt.		
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.					

J. F. POWER, INSPECTOR—*Concluded.*

5.58	3.496	0.376	0.227	1.2	trace.	61.2	Medium	Large ..	None...	38221	Genuine. Alkalinity and soluble $P_2O_5$ low.
3.93	0.518	0.017	0.010	1.0	none.	about 2.0	Trace...	None...	None...	38222	Imitation malt vinegar.
5.46	1.748	0.405	0.261	6.2	8.0	46.0	Large ..	Medium	Copious	38223	Genuine. Solids low.
5.13	2.080	0.225	0.113	6.8	17.2	55.0	Medium	"	"	38224	Genuine.

D. O'SULLIVAN—INSPECTOR.

5.49	1.810	0.414	0.257	7.4	9.7	40.8	Large ..	Medium	Copious	47631	Genuine. Solids low.
4.62	2.322	0.342	0.208	1.0	none.	28.0	Medium	Large ..	"	47632	Genuine. Alkalinity and soluble $P_2O_5$ low.
4.86	0.345	0.020	0.015	1.6	"	trace.	None...	None...	None...	47633	Imitation malt vinegar.
4.26	2.820	0.466	0.270	7.6	"	24.4	Large ..	Medium	Medium	47634	Genuine. Sol. $P_2O_5$ and lead Ppt low.
5.10	2.162	0.314	0.191	9.6	10.8	36.8	Medium	"	Copious	47635	Genuine.
5.16	2.322	0.252	0.104	5.8	18.1	54.0	"	"	"	47637	Genuine.
5.73	1.830	0.310	0.185	10.0	34.4	47.2	"	Trace...	"	47639	Genuine. Solids low.
5.55	3.530	0.356	0.201	1.2	trace.	61.6	"	Medium	"	47640	Genuine. Alkalinity and soluble $P_2O_5$ low.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NOVA SCOTIA—

1911.								
Oct. 25	Vinegar...	46722	Nat. Drug & Chem. Co., Halifax, N.S.	1½ pt..	15	Vendors.....		Sovereign Brand Cider Vinegar.
" 25	" ..	46723	J. Frank Crowe, Ltd., Halifax, N.S.	1½ "	8	Wilson, Lytle & Badgerow, Toronto.	Manufacturers	Sold as cider....
Nov. 15	" ..	46728	Annapolis Valley Vinegar Co., Bridge town, N.S.	1½ "	Nil.	Vendors.....		Cider.....

DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 17	Vinegar...	46093	S. Sanderson & Co., Charlotte-town, P.E.I.	1 qt..	10	Standard Vinegar Co., Berwick, N.S.		Cider.....
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DISTRICT OF NEW BRUNSWICK—

Oct. 17	Vinegar...	45526	Geo. A. Troop & Co., St. John, N.B.	1 qt.	10	Vendors. ....		Apple Cider Vinegar.
" 17	" ..	45529	W. A. Fairweather Co., Ltd., St. John, N.B.	1 "	10	" .....		" "
Nov. 7	" ..	45531	John McKnight, Fredericton, N.B.	1 "	10	M. W. Graves & Co., Bridge-town, N.S.		"
" 8	" ..	45532	Woolverton & Gibson, Woodstock, N.B.	1 "	10	Thos. McCready & Son, St. John, N.B.	Furnished by mfrs. to vendors as xxxc.	Cider Vinegar ..
" 14	" ..	45533	King, Asbell & Co., Sussex, N. B.	1 "	5	M. W. Graves & Co., Bridge-town, N.S.		" "
" 15	" ..	45534	D. A. McBeath, Moncton, N.B.	1 "	10	Annapolis Valley Cyder Vinegar Co., Bridgetown, N.S.		" "

DISTRICT OF ST. HYACINTHE—

Oct. 26	Vinegar...	1394	Olmstead & Bo-right, Sutton.	1 pt..	5	Wilson, Lytle & Badgerow, Toronto.		Cider Vinegar ..
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SESSIONAL PAPER No. 14

VINEGAR (CIDER).

RESULTS OF ANALYSIS.												
Gms. per 100cc.			Soluble ash.	Alkalinity of solu- ble ash $\frac{N}{10}$ cc. in acid per 100cc.	Phosphates Mgms. $P_2O_5$ per 100cc.		Chlorides.	Sulphates.	Lead acetate ppt.	Polarization.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Acidity as Acetic.	Solids.	Ash.			Soluble.	Insoluble.						

R. J. WAUGH—INSPECTOR.

4.26	0.670	0.092	0.075	10.8	Trace.	Trace.	Heavy trace.	None.	None...	0.0	46722	Is not a true cider vinegar. Doubtful.
3.75	0.156	0.021	0.013	1.8	None.	None.	Slight trace.	Trace.	"	.....	46723	" "
3.15	2.123	0.330	0.297	41.6	7.8	6.8	Trace	"	Medium	-0.4	46728	Genuine cider vinegar.

WM. A. WEEKS—INSPECTOR.

4.95	2.286	0.374	0.342	46.8	9.6	6.4	Slight trace.	Slight trace.	Medium	-1.1	46093	Genuine cider vinegar.
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J. C. FERGUSON—INSPECTOR.

4.23	1.543	0.350	0.300	35.6	3.3	10.2	Trace.	Slight trace.	Copious	-0.9	45526	Genuine cider vinegar.
3.45	1.762	0.404	0.268	16.4	None.	11.2	Very large amount	Trace.	"	-1.4	45529	Alkalinity of ash too low. Doubtful.
5.13	1.516	0.260	0.238	31.6	6.8	7.6	Trace.	Slight trace.	Medium	-0.7	45531	Genuine cider vinegar.
4.59	0.102	0.096	None.	0.6	None.	None.	Slight trace.	None.	None...	...	45532	Is not cider vinegar. Doubtful.
4.14	2.875	0.362	0.298	42.8	4.8	10.6	"	Slight trace.	Copious	0.0	45533	Genuine cider vinegar.
0.63	3.076	0.206	0.180	26.4	2.6	6.2	"	"	Very copious.	.....	45534	Is cider. Alcoholic and acetic fermentations going on.

J. C. ROULEAU—INSPECTOR.

5.82	2.170	0.250	0.193	24.8	2.0	14.4	Trace.	Slight trace.	Copious	-0.7	1394	Probably genuine Phosphates and alkalinity low.
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3 GEORGE V., A. 1913  
BULLETIN No. 235—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not and expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	
DISTRICT OF OTTAWA—								
1911.								
Oct. 16	Vinegar...	49024	W. West, Almonte.	1 qt..	8	Annapolis Valley Cyder Co., Ltd., Bridgetown, N.S.		Cider Vinegar ..
" 25	" ..	49027	A. Moreland, Bank St., Ottawa.	1 " ..	15	M. W. Graves & Co., Bridgetown, N.S.	F. J. Castle, Ltd., Ottawa	" " ..
" 27	" ..	49030	R. E. Powell, WellingtonSt., Ottawa.	1 " ..	10	S. A. Allen, Norwich, Ont.		" " ..
DISTRICT OF TORONTO—								
Oct. 24	Vinegar ..	47361	C. W. Fox Owen Sound.	1 qt ..	10		Taylor & Pringle, Owen Sound.	XXX Cider Vinegar.
" 26	" ..	47362	G. Dyce & Co., Meaford.	" ..	10		The Dominion Vinegar Co., Ltd., Hamilton.	" ..
Nov. 2	" ..	47363	The Whitby Fruit & Vinegar Co., Whitby.	" ..	10	Vendors.....		" ..
" 3	" ..	47364	The Stouffville Cider & Vinegar Co. Ltd., Stouffville.	" ..	10	" ..		" ..
DISTRICT OF LONDON—								
Oct. 16	Vinegar ..	47806	Moylan & Moylan, St. Thomas.	1 qt ..	5	Belleville Fruit & Vinegar Co., Belleville.		Cider Vinegar..
" 16	" ..	47809	E. J. Witheford, St. Thomas.	" ..	5	Unknown. ...		" ..
" 17	" ..	47814	J. Caron, Ridgetown, Ont.	" ..	10		Masuret & Co. London.	" ..
" 19	" ..	47843	A. Detwiler, Essex.	" ..	8		J. F. Smith & Co., Windsor.	" ..
DISTRICT OF NELSON								
Oct. 27	Vinegar ..	48460	Hunter Bros., Rossland.	24 oz..	15	Nelson Lytle & Adger, Nelson, B.C.		Cider Vinegar..



## SESSIONAL PAPER No. 14

## VINEGAR (CIDER.)

RESULTS OF ANALYSIS.												No. of Sample.	Remarks, and opinion of the Chief Analyst.
Gms. per 100 cc.			Soluble Ash.	Alkalinity of soluble Ash cc. in acid per 100 cc.	Phosphates Mgms. P <sub>2</sub> O <sub>5</sub> per 100 cc.		Chlorides.	Sulphates.	Lead Acitrate Ppt.	Polarization.			
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.							

## J. A. RICKEY—INSPECTOR.

3.57	1.660	0.320	0.290	37.2	6.4	7.6	Trace.	None.	Medium	-0.8	49024	Genuine cider vinegar.
4.20	1.824	0.332	0.298	41.6	6.2	8.8	"	Trace.	"	-0.9	49027	" "
5.25	2.250	0.240	0.196	23.6	5.6	2.0	"	"	"	-2.3	49030	Probably genuine, but alkalinity and phosphoric acid are low.

## H. J. DAGER—INSPECTOR.

5.34	0.925	0.116	0.061	4.8	None.	9.8	heavy trace.	Trace.	Medium	0.0	47361	Is not cider vinegar. Doubtful.
5.13	0.310	0.043	0.029	1.6	"	11.8	None.	Slight trace.	None...	...	47362	Is not cider vinegar. Doubtful.
4.50	2.667	0.330	0.280	39.2	6.6	10.6	Slight trace.	"	Copious	-1.5	47363	Genuine cider vinegar.
4.89	0.946	0.122	0.072	8.0	None.	7.6	Trace.	Trace.	None...	-0.4	47364	Is not cider vinegar. Doubtful.

## JNO. TALBOT—INSPECTOR.

5.25	1.524	0.286	0.198	19.6	None.	16.0	Large amt.	Slight trace.	Medium	-1.4	47806	Doubtful. Phosphates and alkalinity too low.
2.91	0.332	0.075	0.048	6.0	"	2.0	Slight trace.	"	None...	0.0	47809	Is not cider vinegar. Doubtful.
4.00	0.462	0.070	0.047	5.6	Trace.	2.8	"	"	"	0.0	47814	" "
4.05	0.350	0.050	0.030	4.4	"	3.0	"	None.	"	+0.2	47843	" "

## THOS. PARKER—INSPECTOR.

5.28	0.476	0.048	0.019	3.2	None.	2.4	Slight trace.	None.	None...	+0.8	48460	Is not cider vinegar. Doubtful.
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3 GEORGE V., A. 1913

BULLETIN No. 235—VINEGAR NOT SOL

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC—

1911.								
Oct. 16	Vinegar...	36987	E. Grégoire, 128 Rue du Pont, Quebec.	1 qt..	15	Drouin & Frere & Rattray.	Manufacturers	.....
" 17	" ..	33988	W. Cantin, 133 Rue du Pont, Quebec.	1 "	20	Unknown .....	J. C. Letourneau.	.....

DISTRICT OF ST. HYACINTHE

Oct. 25	Vinegar...	1391	J. Dagenais et Cie, Farnham.	1 pt..	5	E. de la Bruyere, et Cie, Bordeaux.	.....	.....
Nov. 8	" ..	1396	E. Huard et Cie, Megantic.	1 "	5	Eureka Vinegar Works, Quebec	.....	Proof. Uncoloured.
" 9	" ..	1397	Art. Leclair, North Coaticook.	1 "	.....	.....	D. S. Bachand, Coaticook.	.....
" 23	" ..	1399	Victor Cabana, St. Hyacinthe.	1 "	5	St. Hyacinthe Dist. Co.	.....	Proof.

DISTRICT OF MONTREAL—

Oct. 24	Vinegar ..	40907	D. Etu, St. Agathe de Mont., P.Q.	1 qt..	15	.....	Hudon, Hebert et Cie, Ltd.	.....
" 17	" ..	40908	L. M. Lefebvre, 393 Rachel St. E., Montreal.	1 "	15	.....	.....	Bolmans. Imported.
" 17	" ..	40909	J. Niding, 54 Rachel St. E., Montreal.	1 "	12	.....	.....	.....
" 17	" ..	40911	Dubois & Marcil, 391 Roy St., Montreal.	1 "	15	.....	Laporte, Martin et Cie, Ltd.	.....
" 27	" ..	40912	L. A. Chartier, Joliette, P.Q.	1 "	10	.....	.....	.....
	" ..	40913	J. E. Hebert, Beauharnois, P.Q.	1 pt..	13	.....	.....	.....
	" ..	40914	O. Marchand, Beauharnois, P.Q.	1 "	10	.....	L. Chaput Fils & Co., Ltd.	.....
	" ..	40915	J. A. Faubert, Beauharnois, P.Q.	1 "	15	Heinz .....	.....	.....

DISTRICT OF MANITOBA—

Oct. 25	Vinegar ..	47421	Mikush & Bierbaumer, Winnipeg.	1 qt..	10	Unknown .....	Unknown .....	.....
"	" ..	47424	A. J. Kemball, Winnipeg.	1 "	10	" .....	" .....	.....



SESSIONAL PAPER No. 14  
AS WINE, MALT OR CIDER VINEGARS.

RESULTS OF ANALYSIS.									
Gms. per 100 cc.			Chlorides.	Sulphates.	Iodine test for fer- mented vinegar.	Formic Acid.		No. of Sample.	Remarks and opinion of the Chief Analyst.
Acidity as acetic.	Solids,	Ash.				Mgms. in 100 cc.	Parts per 1000 of total acid.		
F. X. W. E. BELAND—INSPECTOR.									
7.56	0.308	0.050	heavy trace.	none. ....	.....	2.6	0.35	36987	Spirit vinegar, possibly fortified by actie acid. Doubtful.
5.01	0.415	0.018	trace.....	" ....	... ..	0.5	0.10	36988	Spirit vinegar.
J. C. ROULEAU, INSPECTOR.									
4.98	0.139	0.014	trace. ....	slight trace.	ppt.,. ....	.....	.....	1391	Spirit vinegar.
7.38	0.177	0.039	" ...	none.....	" .....	.....	.....	1396	"
4.17	0.175	0.035	slight trace.	slight trace.	" .....	none.....	.....	1397	"
6.72	1.028	0.042	" ..	none.....	" .....	.....	.....	1399	"
J. J. COSTIGAN, INSPECTOR.									
4.56	0.117	0.046	trace.....	none. ..	ppt.. ....	.....	.....	40907	Spirit vinegar.
4.16	0.131	0.030	none. ....	trace.....	very slight ppt.	4.4	1.06	40908	Spirit vinegar, fortified by acetic acid. Doubtful.
5.10	0.122	0.030	trace.....	" ....	ppt.. ....	trace... ..	.....	40909	Spirit vinegar.
5.28	0.025	0.015	none. ....	none. ....	clear. ....	31.6	5.98	40911	Made from acetic acid. Adulterated.
6.12	0.197	0.029	trace.....	trace.....	ppt.. ....	.....	.....	40912	Spirit vinegar.
4.98	0.170	0.031	heavy trace.	slight trace.	" .....	.....	.....	40913	"
7.53	0.160	0.018	trace.....	none .....	slight ppt.	0	0.80	40914	Spirit vinegar, fortified by acetic acid. Doubtful.
4.65	0.186	0.035	" ....	trace.....	" .....	.....	.....	40915	Spirit vinegar.
A. C. LARIVIÈRE, INSPECTOR.									
5.64	0.314	0.122	large.....	medium ..	ppt... ....	0.7	0.13	47421	Spirit vinegar.
5.58	0.300	0.034	" .....	" ..	" .....	0.8	0.15	47424	"



3 GEORGE V., A. 1913

BULLETIN No. 235—VINEGAR NOT SOLD

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1911.								
Oct. 18	Vinegar ..	38219	Clark's Grocery, Carrall St., Vancouver.	1 qt..	15	B. C. Distillery Co., Vanc.	.....	Special Canadian Vinegar.
" 19	" ..	38220	B. C. Vinegar Works, Powell St., Vancouver	1 " .	25	Vendors.....	.....	Is guaranteed pure and free from all mineral acids.

DISTRICT OF VICTORIA—

Nov. 13	Vinegar ..	47638	F. E. Plummer, Victoria.	1 qt..	15	B. C. Vinegar Works, Vanc.	.....	Sunset Brand. Pure vinegar.
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Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	
				Quantity.	Cents.	Manufacturer.	Furnisher.

DISTRICT OF MANITOBA —

1911.							
Oct. 21	Vinegar.....	47419	The White Star M'fg. Co., Winnipeg.	1 qt..	Nil.	Unknown ..	.....
" 25	" .....	47422	Moffett & Douglas, Winnipeg.	"	10	"	Unknown .....



SESSIONAL PAPER No. 14

AS WINE, MALT OR CIDER VINEGARS.

RESULTS OF ANALYSIS.							No. of Sample.	Remarks and opinion of the Chief Analyst.	
Gms. per 100 cc.			Chlorides.	Sulphates.	Iodine test for fer- mented vinegar.	Formic Acid.			
Acidity as acetic.	Solids.	Ash.				Mgms. in 100 cc.			Parts per 1000 of total acid.

J. F. POWER, INSPECTOR.

4.41	0.184	0.008	none. . . .	none.....	ppt... . . . .	trace.....	.....	38219	Spirit vinegar.
10.25	0.155	0.007	" . . . . .	" . . . . .	" . . . . .	.....	.....	38220	" above vinegar strength.

D. O. SULLIVAN, INSPECTOR.

5.04	0.362	0.028	none. . . . .	slight trace.	ppt... . . . .	.....	.....	47638	Spirit vinegar.
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RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Gms. per 100cc.			Soluble Ash.	Alkalinity of soluble ash cc. $\frac{N}{10}$ acid per 100 cc.	Phosphates Mgms. $P_2O_5$ per 100 cc.		Chlorides.	Sulphates.	Lead acetate ppt.		
Acidity as acetic.	Solids.	Ash.			Soluble.	Insoluble.					

A. C. LARIVIERE, INSPECTOR.

p.c.	p.c.	p.c.									
11.91	0.690	0.048	0.038	2.4	Trace . .	2.8	Slight trace.	Slight trace.	None.	47419	Imitation malt vinegar. Above vinegar strength. Doubtful.
3.18	0.758	0.114	0.091	1.2	None...	Trace . . .	Medium	Medium	Trace.	47422	Imitation malt vinegar. Doubtful.



APPENDIX L.

BULLETIN No. 236.—GROUND GINGER.

OTTAWA, March 8, 1912.

W. J. GERALD, Esq.,  
Deputy Minister of Inland Revenue.

SIR,—I beg to hand you a report upon 151 samples of ground ginger, purchased throughout Canada in October, 1911.

Ground ginger has been investigated and reported by this department as follows:—

	Total Samples.	Percentages.		
		Genuine.	Adulterated	Doubtful.
Bulletin 48—1896.....	98	67	28	5
" 95—1904.....	10	60	40	0
" 137—1907.....	30	97	0	3
" 184—1909.....	150	65	21	14
" 236--1912 ..	151	84	9	7

The results of previous work on ginger have been synopticised in Bulletin 184, from which the following is reprinted:—

‘The usual recognized adulteration of ginger consists in the substitution of cheaper materials (flour, starch, &c.) or in the use of exhausted rhizomes, i.e., stock from which the valuable principles have been more or less completely removed by washing. The examinations which form the basis for reports above referred to, have regard primarily to the detection of adulteration as described. But each report contains an account of more or less investigatory work, undertaken in the desire to put on record such data regarding ginger as should, at some future time, enable us to recommend the adoption of a definition of ginger, based upon its physical and chemical constants, and comprehensive enough to warrant its being made legal, under Section 26 of the Adulteration Act.

‘A definition of ginger recommended by the United States Food Standards Committee, is as follows:—Ginger is the washed and dried or decorticated and dried, rhizome of *Zingiber Zingiber* (L) Karst., and contains not less than forty-two (42) per cent of starch, not more than eight (8) per cent of crude fibre, not more than six (6) per cent of total ash, not more than one (1) per cent of lime, and not more than three (3) per cent of ash insoluble in hydrochloric acid.’

‘Limed ginger, bleached ginger, is whole ginger, coated with carbonate of lime, and contains not more than ten (10) per cent of ash, not more than four (4) per cent of carbonate of lime, and conforms in other respects to the standard for ginger.’

The British Pharmacopœia describes ginger as ‘The scraped and dried rhizome of *Zingiber officinale*, Roscoe’; and gives the physical characters of the rhizome; but does not mention ground ginger, nor attempt any enumeration of chemical



## SESSIONAL PAPER No. 14

characters. (Edn. 1898). Squire's Companion (Edn. of 1908) gives the following tests for ginger:—The cells contain resin, (and) pyriform compressed starch grains 12 to 40  $\mu$ m. long, appearing linear when seen laterally, having the hilum at the smaller end; thin walled, polyzonal parenchymatous cells, and sometimes septate bast fibres with irregularly nodose extremities. When unbleached yields 3 to 4 per cent ash, and 5 per cent should not be exceeded. Not less than 1.5 per cent soluble ash. Extractive matter to cold water usually about 10 per cent and should not be less than 8.5 per cent; the extractive matter soluble in 90 per cent alcohol usually amounts to about 5 per cent and should not be materially below this figure.'

It is apparent, from these citations, that we have but a very vague and indefinite knowledge of ginger; and it may be well to synoptinize the main points brought out by the research work reported in the bulletins from this laboratory.

*Bulletin No. 48* contains photomicrographic reproductions of genuine and adulterated gingers, magnified 225 diameters, and seen under polarized light. The differences between ginger starch, and such starches as are commonly employed in adulteration of ginger, are well shown.

A synoptical table of published results in the chemical examination of ginger is furnished, and the following conclusion reached. 'An examination of these results shows that no single component of ginger is sufficiently constant in amount to make the identification of a sample as genuine possible by its means.'

Analytical numbers concerning 98 samples include moisture, cold water extractive, total ash; and in certain cases, petroleum ether and alcohol extractive, soluble ash, and alkalinity of ash.

Samples are only condemned as adulterated, in cases where foreign starch in amount exceeding 10 per cent is found.

*Bulletin No. 95* reports only 10 samples of ground ginger; giving moisture, cold water extractive and results of microscopic examination. One sample is condemned as containing wheat starch. Three others are called in question as giving only 14.1, 15.3, and 14.9 per cent extractive to cold water. These probably contain exhausted ginger, since similar extraction of genuine samples afforded nearly or quite 20 per cent of extractive. But it would be safer to describe these samples as 'doubtfully genuine' than as adulterated.

The details for cold water extraction of ginger are given (pp. 24 and 25), and the analyst adds:—'I have not met with an authenticated sample of ginger which gave less than 19 per cent of extractive to cold water, when treated as described.'

*Bulletin No. 137* reports upon 30 samples, of which 29 appear to be genuine, as judged by microscopic characters, and the cold water extractive, carried out by the process described above. Extraction amounts to above 20 per cent by weight on the dry ginger, in most samples, and in several reaches 24 per cent.

A consideration of all work recorded for ginger leads to the conclusion that microscopic examination and determination of cold water extractive are quite the most valuable tests that can be applied to the ground ginger of commerce. Determination of ash is rendered comparatively valueless on account of the variability in methods of preparing ginger for the market. The rhizome may be merely washed, or it may be scraped, or decorticated or limed; and ground ginger may result from the grinding of rhizomes prepared in any or all of these ways. The total ash of 64 samples of ginger, believed to be genuine, reported in Bulletin 48, varies from 3.60 per cent to 7.14 per cent.

The ash of ginger consists partly of alkaline carbonates, which are soluble in water; partly of earthy carbonates, sulphates, and phosphates, insoluble in water but easily dissolved by hydrochloric acid, and partly of silicates and sand, insoluble in



acid. Extraction of the ginger with water (which is one of the commonest forms of adulteration) has the effect of greatly reducing the amount of soluble ash, yielded by the sample, as shown in the following table:—

Number of Sample.	Effect of Water Extraction of Ginger upon the amount and character of the ash.					
	Before Extraction.			After Extraction.		
	Total.	Water Soluble.	Ratio.	Total.	Water Soluble.	Ratio.
37584 .....	5.42	2.18	0.40	3.14	0.65	0.21
37587 .....	4.65	1.98	0.42	2.25	0.30	0.13
39458 .....	4.59	2.38	0.52	1.38	0.24	0.18
39461 .....	3.63	1.86	0.51	0.98	0.15	0.15

A study of these results shows that the total ash is much reduced by previous extraction, as might be expected; and nearly 70 per cent of the diminution in amount is due to a reduction in water soluble ash.

Number of Sample.	Effect of Water Extraction of Ginger upon the amount and character of the ash.		
	Total ash reduced.	Soluble ash reduced.	Ratio p.c.
37584 .....	2.28	1.53	69
37587 .....	2.40	1.68	70
39458 .....	3.21	2.14	67
39464 .....	2.65	1.71	65

The samples of ginger upon which this work was done appear to be genuine, as evidenced by the microscopic examination, the cold water extractive, and other characters.

The presence of foreign starches or of flour in ground ginger will naturally reduce the total ash, since the normal ash of flour is less than one-half of one per cent, and that of starch practically nil. The ratio of soluble to total ash will be but little affected by addition of starch to a normal ginger.

In the absence of legal recognition of the value of this ratio in discriminating between normal and exhausted ginger, I am unable to make use of it in judging the genuineness of the samples now reported; but I have noted all cases where the ratio falls beyond the limits 0.40 to 0.70, as '*abnormal*.' When the total ash exceeds 6 per cent I have noted '*ash high*'; when below 3 per cent I have noted '*ash low*.' These terms cannot be regarded as having legal value in establishing the character of the article.

Of course the amount of extractive to cold water will be affected by the method of carrying out the extraction. This is described in Bulletin No. 95, p. 24, as it was employed by me in the work recorded in Bulletins 95 and 137. It involved the use of a mechanical shaker and centrifuge, and genuine gingers yielded about 20 per cent of extractive. The cold water extraction, as now reported, has been made by treating 5 grammes of the sample with 250 cc. of water, in a glass flask, which is shaken by hand at intervals of half an hour during eight hours; allowed to stand over night



SESSIONAL PAPER No. 14

when an aliquot part by volume of the solution is evaporated in platinum to constant weight. This method is less effective in exhausting the ginger, but has the advantage of being available in laboratories not equipped with the mechanical devices required for carrying out the first method described. The normal extractive, by this method, appears to be about 15 or 16 per cent of the weight of the ginger (dry).

It is interesting to note that the low extractive recorded in the accompanying table, for certain samples, is usually correlated to the presence of foreign starchy matters. Where a low extractive is not explained by presence of foreign starch, the only explanation available would seem to be the previous extraction of the rhizome.

The requirements of the British Pharmacopœia in the matter of extractive would appear to be entirely too low.

I have not seen any investigatory work on ginger since 1909, which materially alters the conclusions above recorded.

The cold water extractive in the samples now reported, has been made by the same method used in Bulletin 184, and normal samples should yield about 16 per cent of extractive, calculated upon the dry material.

Six samples of the present collection are found to contain foreign starch, and are therefore adulterated under the Act (Sec. 3a).

Sixteen other samples contain less than 14 per cent of extractive to cold water. These must be judged to contain more or less of exhausted ginger, if we apply the results of investigatory work recorded on the preceding pages. In the absence of a legal standard for cold water extractive, I am unable to pronounce them adulterated under the terms of the Act; but they cannot be regarded as of less than doubtful quality. Eight of these samples yield less than 12 per cent to cold water, thereby indicating a very considerable admixture of exhausted rhizomes.

I beg to recommend publication of this report as Bulletin No. 236.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*



3 GEORGE V., A. 1913  
BULLETIN No. 236—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

## DISTRICT OF NOVA SCOTIA—

1911.								
Oct. 16	Ground Ginger.	46701	D. C. Mulhall, Liverpool, N.S.	$\frac{1}{4}$ lb.	7	Nat. Drug & Chem. Co.	Manu- facturers.	"Sovereign" Brand.
" 17	" "	46702	Hendry Ltd., Liverpool, N.S.	$\frac{1}{4}$ "	8	W.H.Schwartz & Sons, Halifax, N.S.	"	Labelled Pure.
" 25	" "	46703	Nat. Drug & Chem. Co., Halifax, N.S.	$\frac{1}{4}$ "	8	Vendors	"	"Sovereign" Brand.
" 25	" "	46704	J. Frank Crowe Co., Ltd., Halifax, N.S.	$\frac{1}{4}$ "	7	W.H.Schwartz & Sons, Halifax.	Manu- facturers.	Peerless Brand Pure.
" 25	" "	46705	Bauld Bros., Ltd., Halifax, N.S.	$\frac{1}{4}$ "	6	"	"	"
" 26	" "	46706	Jno. P. Mott & Co., Halifax, N.S.	$\frac{1}{4}$ "	nil.	Vendors	"	Labelled Pure.
" 27	" "	46707	Wentzells Ltd., Halifax, N.S.	$\frac{1}{4}$ "	7	Jno. P. Mott & Co., Halifax.	Manu- facturers.	"
Nov. 14	" "	46708	B. H. Dodge, Kentville, N.S.	$\frac{1}{4}$ "	8	G. E. Barbour, St. John, N.B.	"	"Acorn" Brand.
" 17	" "	46709	B. O. Bishop, Dartmouth, N.S.	$\frac{1}{4}$ "	8	Jno. P. Mott & Co., Halifax.	"	Labelled Pure.
" 20	" "	46710	W. H. Schwartz & Sons, Halifax, N.S.	$\frac{1}{4}$ "	6	Vendors	"	"

## DISTRICT OF PRINCE EDWARD ISLAND—

Oct. 16	Ground Ginger.	46126	John McKenna, Charlottetown, P.E.I.	$\frac{1}{4}$ lb.	10	W.H.Schwartz & Sons, Halifax.		
" 17	" "	46127	E. Toombs, Charlottetown, P.E.I.	$\frac{1}{4}$ "	10		N. Rattenbury, Charlottetown, P.E.I.	
" 18	" "	46128	M. Duffy, Charlottetown, P.E.I.	$\frac{1}{4}$ "	10	Unknown		
" 18	" "	46129	Stewart & Son, Charlottetown, P.E.I.	$\frac{3}{4}$ "	30	Maritime Spice & Coffee Mills, St. John, N.B.		
" 19	" "	46130	Coffin & Co., Charlottetown, P.E.I.	$\frac{1}{4}$ "	18	G. E. Barbour, St. John, N.B.		
" 19	" "	46131	L. A. Hazard, Charlottetown, P.E.I.	$\frac{1}{4}$ "	10	McCreedy & Sons, Ltd., St. John, N.B.		
" 20	" "	46132	J. A. Hynes, Kensington, P.E.I.	$\frac{1}{4}$ "	10	Crown Spice Mills.		



SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Ash.			Moisture.	Cold water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry (Ginger.			

R. J. WAUGH, INSPECTOR.

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
3.54	2.34	1.20	9.95	16.30	18.10	Ginger Starch and tissues	46701	Genuine.
5.76	2.44	3.32	9.17	15.10	16.62	"	46702	"
3.62	2.42	1.20	10.02	15.60	17.34	"	46703	"
4.74	2.50	2.24	10.00	14.20	15.77	"	46704	"
5.12	1.86	3.26	10.35	17.50	19.51	"	46705	"
3.92	1.90	2.02	9.35	14.00	15.44	"	46706	"
3.54	2.80	0.74	9.02	14.10	15.49	"	46707	"
4.20	2.26	1.94	9.12	15.70	17.27	"	46708	"
6.00	3.10	2.90	10.05	14.60	16.23	"	46709	"
4.78	2.28	2.50	10.27	14.30	15.93	"	46710	"

WM. A. WEEKS, INSPECTOR.

5.60	2.92	2.68	9.88	15.60	17.19	Ginger Starch and tissues	46126	Genuine.
7.26	3.46	3.80	9.92	13.85	15.26	"	46127	" Ash high.
1.82	1.42	0.40	9.31	10.95	12.07	Ginger Starch and tissues with maize starch.	46128	Adulterated.
3.42	2.44	0.98	10.54	17.45	19.49	Ginger Starch and tissues	46129	Genuine.
4.10	2.16	1.94	9.46	16.60	18.33	"	46130	"
3.98	2.00	1.93	8.00	17.20	18.69	"	46131	"
8.84	4.12	4.72	9.00	15.90	17.47	"	46132	" Ash high



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of Opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF PRINCE EDWARD ISLAND—

1911.								
Oct.	21	Ground Ginger.	46133 D. McKenzie & Co., Kensington, P.E.I.	$\frac{1}{4}$ lb.	10	G. E. Barbour & Co., St. John, N.B.		
"	21	" ..	46134 James Kennedy, Kensington, P.E.I.	$\frac{1}{4}$ "	10	Dearborn & Co., St. John, N.B.		
"	21	" ..	46135 McLellan & Co., Ltd., Summer-side, P.E.I.	$\frac{1}{4}$ "	10	Nat. Drug Co., Halifax, N.S.		

DISTRICT OF NEW BRUNSWICK—

Oct.	12	Ground Ginger.	45560 Dearborn & Co., St. John, N.B.	$\frac{1}{4}$ lb.	10	Vendors .....		
"	12	"	45561 Geo. E. Barbour, Co., Ltd., St. John, N.B.	$\frac{1}{4}$ "	10	" .....		
"	20	"	45562 H.S. Francis, St. John, N.B.	$\frac{1}{4}$ "	10	C H. Cochrane, Ottawa, Ont.		
"	20	"	45563 M. E. Grass, St. John, N.B.	$\frac{1}{4}$ "	10	White Swan Co., Ltd., Toronto.		
Nov.	3	"	45564 H. E. Hill, St. Stephen, N.B.	$\frac{1}{4}$ "	10	Wright Cross-ley & Co., Liverpool, Eng.		
"	7	"	45565 The Yerxa Gro-cery Co., Fred-erickton, N.B.	$\frac{1}{4}$ "	10	Dearborn & Co., St. John, N.B.		
"	10	"	45566 H. N. Dickinson, Perth, N.B.	$\frac{1}{4}$ "	10	Geo. E. Bar-bour, Co., Ltd., St. John, N.B.		
"	14	"	45567 Sussex Mercan-tile Co., Ltd., Sussex, N.B.	$\frac{1}{4}$ "	10	C. H. Cochrane & Co., Ot-tawa.		
"	16	"	45568 S. A. Russell, New-castle, N.B.	$\frac{1}{4}$ "	10	.....	H. W. Cole, Ltd., St. John, N.B.	Thistle Brand..
"	17	"	45569 S. Holdengraber, Bathurst, N.B.	$\frac{1}{4}$ "	10	Unkown..	Unknown...	

DISTRICT OF QUEBEC—

Oct.	11	Ground Ginger.	37318 J. B. Giroux, 385 Rue St. Joseph, Quebec.	$\frac{1}{4}$ lb.	30	Carton Signy.. Mfrs. . . . .		
"	12	"	37319 Cantin & Frere, 271 Rue St. Joseph, Que.	$\frac{1}{4}$ "	5	Gillett & Co., Toronto.	Unknown...	



SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Ash.			Moisture.	Cold Water Extractive.				
Total.	Water Soluble.	Insoluble in Water.		Normal.	Calculated to dry ginger.			

WM. A. WEEKS, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
4.62	2.28	2.34	9.25	15.70	17.35	Ginger Starch and tissues	46133	Genuine
4.60	1.98	2.62	8.67	13.20	14.46	" ..	46134	Extractive low.
4.58	1.90	2.68	8.90	11.17	12.57	" ..	46135	"

J. C. FERGUSON, INSPECTOR.

3.22	2.24	0.98	8.97	17.10	18.78	Ginger, starch and tissues	45560	Genuine.
3.70	2.46	1.24	8.80	18.20	19.95	" ..	45561	"
4.24	2.16	2.08	9.15	16.10	17.72	" ..	45562	"
3.60	2.34	1.26	8.50	16.30	17.81	" ..	45563	"
6.48	3.40	3.08	8.72	12.50	13.69	" ..	45564	Extractive low.
4.84	2.20	2.64	9.75	13.02	14.42	" ..	45565	"
5.74	3.00	2.74	10.75	17.20	19.27	" ..	45566	Genuine.
4.40	2.20	2.20	9.97	15.70	17.43	" ..	45567	"
5.06	3.46	2.60	9.72	15.50	17.16	" ..	45568	"
3.24	2.12	1.12	10.40	15.40	17.18	" ..	45569	"

F. X. W. E. BELAND, INSPECTOR.

3.58	2.60	0.98	9.75	15.50	17.17	Ginger, starch and tissues	37318	Genuine.
3.40	1.50	1.90	10.00	11.55	12.83	" ..	37319	Extractive low. Ash low



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF QUEBEC—

1911.								
Oct.	13	Ground Ginger.	37320 G. Gingras, 268 1/4 lb.	5	J. J. Duffy, Montreal.	J. B. Renaud, Que.		
"	13	"	37321 " " 1/4 "	10	Unknown...	"		
"	16	"	37322 J. E. Gregoire, 128 Rue du Pont, Que. 1/4 "	8	Pure Gold Co., Toronto.	Mfrs. ....		
"	17	"	37323 W. Cantin, 133 Rue du Pont, Q. 1/4 "	10	Unknown. ....	Unknown...		
"	19	"	37324 A. Pichette, 176 Rue D'Orchester, Que. 1/4 "	10	J. J. Duffy, Montreal.	N. Turcot & Cie.		
"	19	"	37325 Elzear Gagnon, 138 Rue D'Orchester, Que. 1/4 "	5	Marcothe & Leblanc.	Bedard & Frere.		
"	19	"	37326 Jd. Marier, 136 Rue D'Orchester, Que. 1/4 "	5	S. H. Ewing & Son, Montreal.	Turcotte & Frere.		
"	20	"	37327 W. Pamplon, 120 Rue D'Orchester, Que. 1/4 "	6	Unknown. ....	N. Turcotte & Cie.		

DISTRICT OF ST. HYACINTHE—

Oct.	10	Ground ginger.	1171 P. Larochelle, Farnham, P.Q. 1/4 lb.	10	.....	S. H. Ewing & Son, Montreal.		
"	26	"	1172 Nelson Mitchell & Co., Granby. 1/4 "	9	Unknown. ....	Unknown ..		
Nov.	6	"	1173 L. H. Oliver, Sherbrooke. 1/4 "	10	The F. F. Dalley Co., Ltd., Hamilton...		Labelled pure ground ginger.	
"	8	"	1174 M. J. Smith, Megantic. 1/4 "	10	.....	W. Galbraith & Co., Montreal.		
"	8	"	1175 D. P. Matheson & Co., Megantic 1/4 "	10	Pure Food Co., Ltd., Toronto.			
"	9	"	1176 D. W. Stenson, Sherbrooke. 1/4 "	12	Pure Gold Mfg. Co., Ltd., Toronto.			
"	9	"	1177 J. W. Paige, Coaticook. 1/4 "	8	White Swan Spices and Cereals Ltd., Toronto.			
"	22	"	1178 J. O. Peloquin, Sorel. 1/4 "	10	Unknown.....	Unknown. ....		
"	23	"	1179 J. Chaqut, St. Hyacinthe. 1/4 "	10	.....			
"	23	"	1180 J. B. J. Phaneuf, St. Hyacinthe. 1/4 "	10	.....	Eugene Benoit, St. Hyacinthe		
"	21	"	1190 J. O. I. Dutrese, Nicolet. 1/4 "	10	.....	LacailleGendreau & Cie, Montreal.		



## SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Ash.		Moisture.	Cold Water Extractive.					
Total.	Water soluble.		Normal.	Calculated to dry ginger.				
Insoluble in water.								

F. X. W. E. BELAND, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
2.90	1.49	1.41	10.12	15.20	16.90	Ginger starch and tissues	37320	Genuine. Ash low.
4.94	2.40	2.54	9.72	14.70	16.28	" ..	37321	"
5.18	2.48	2.70	10.12	14.70	16.36	" ..	37322	"
2.67	1.39	1.28	9.70	10.86	12.02	Ginger, starch and tissues, with foreign starch, (probably wheat).	37323	Adulterated.
3.04	1.56	1.48	9.92	13.47	14.95	Ginger, starch and tissues	37324	Extractive low.
6.59	1.20	5.39	9.37	14.10	15.55	" ..	37325	Soluble ash low.
3.1	1.78	1.36	10.75	14.00	15.69	" ..	37326	Genuine.
2.82	1.14	1.68	10.90	9.70	10.88	" ..	37327	Extractive low. Ash low.

J. C. ROULEAU, INSPECTOR.

4.10	2.62	1.48	8.10	17.40	18.93	Ginger starch and tissues.	1171	Genuine.
3.66	2.55	1.11	9.40	16.20	17.88	" ..	1172	"
3.58	2.18	1.40	8.28	15.50	16.78	" ..	1173	"
3.26	1.80	1.46	8.87	14.10	15.47	" ..	1174	"
4.10	1.80	2.30	10.90	15.20	17.06	" ..	1175	"
3.60	2.14	1.46	9.37	16.90	18.64	" ..	1176	"
2.60	0.86	1.74	8.25	15.20	16.56	" ..	1177	Ash low
3.40	1.60	1.80	8.12	15.40	16.76	" ..	1178	Genuine
4.44	3.04	1.40	9.42	18.50	20.42	" ..	1179	"
3.50	1.36	2.14	9.57	17.20	19.02	" ..	1180	"
3.14	1.40	1.74	8.28	9.80	10.68	Ginger starch and tissues and maize starch.	1190	Adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MONTREAL—

1911.								
Oct. 19	Ground ginger.	40931	L. L. Desaulnier, 437 Notre Dame St. West, Montreal.	$\frac{1}{4}$ lb.	10	Unknown.		
" 19	" ..	40932	J. A. Villeneuve, 185 Ottawa St., Montreal.	$\frac{1}{4}$ "	10	"		
" 20	" ..	40933	J. Deneau, 53 Jurors St., Montreal.	$\frac{1}{4}$ "	10	S. H. Ewing & Son, Montreal.		
" 20	" ..	40934	J. L. Steele, 188 Dorchester St., Montreal.	$\frac{1}{4}$ "	10			
" 20	" ..	40935	O. Murtel, 166 Dorchester St., Montreal.	$\frac{1}{4}$ "	10	J. V. Boudrais, Montreal.		
" 20	" ..	40936	B. Lipson, 309 St. George St., Montreal.	$\frac{1}{4}$ "	10	S. H. Ewing & Son, Montreal.		
" 23	" ..	40937	J. S. Belisle, 129 Wellington St., Montreal.	$\frac{1}{4}$ "	10			Sold as pure.
" 24	" ..	40938	Mde. N. Fournelle, St. Agathe de Monts, P.Q.	$\frac{1}{4}$ "	10		Watt & Godin, Montreal.	
" 27	" ..	40939	E. Dufour, Joliette, P.Q.	$\frac{1}{4}$ "	10			
" 27	" ..	40940	J. A. Lavallee, Joliette, P.Q.	$\frac{1}{4}$ "	10			

DISTRICT OF OTTAWA—

Oct. 10	Ground ginger.	49041	J. H. Edwards, Carleton Place	$\frac{1}{4}$ lb.	10	Gorman Eckert & Co., Ltd., London, Ont.		
" 13	" ..	49042	Jas. L. P. Sanders, Kemptville.	$\frac{1}{4}$ "	10	C. H. Cochrane & Co., Ottawa.		Pure Jamaica ginger.
" 16	" ..	49043	Geo. Illingworth, Almonte.	$\frac{1}{4}$ "	10		Robertson, Nicolle & Co., Smith Falls.	
" 20	" ..	49044	A. F. Dey & Co., Finch.	$\frac{1}{2}$ "	8	Unknown.	Unknown.	
" 20	" ..	49045	Fulton Bros., Chesterville.	$\frac{1}{4}$ "	8		Birk's Corner, Montreal.	
" 25	" ..	49046	McDonald Bros., Ottawa.	$\frac{1}{4}$ "	10	C. H. Cochrane & Co., Ottawa.		



## SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Ash.			Moisture.	Cold Water Extractive.				
Total:	Water solu- ble.	Insoluble water.		Normal.	Calculated to dry gin- ger.			

## J. J. COSTIGAN, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
3.42	2.46	0.96	8.87	15.50	17.00	Ginger starch and tissues.	40931	Genuine.
1.96	1.03	0.93	9.00	17.00	18.68	Ginger starch and tissues, with a little maize starch.	40932	Ash low.
4.80	2.90	1.90	8.57	15.50	16.95	Ginger starch and tissues.	40933	Genuine.
5.96	0.92	5.04	8.87	10.67	11.70	Ginger starch and tissues and maize starch.	40934	Adulterated.
3.12	1.80	1.32	8.92	14.50	15.92	Ginger starch and tissues.	40935	Genuine.
3.44	1.80	1.64	8.90	15.90	17.45	" " ..	40936	"
3.66	1.84	1.82	8.82	18.80	20.61	" " ..	40937	"
12.64	6.08	6.56	8.79	16.80	18.41	" " ..	40938	Ash very high.
3.61	1.59	2.02	8.00	10.90	11.83	" " ..	40939	Extractive low.
4.56	1.96	2.60	8.85	14.10	15.46	" " ..	40940	Genuine.

## J. A. RICKEY, INSPECTOR.

5.04	2.86	2.18	10.27	17.30	19.28	Ginger starch and tissues.	49041	Genuine.
3.64	2.22	1.42	8.87	17.30	18.98	" " ..	49042	"
3.30	1.42	1.88	10.12	10.95	12.18	" " ..	49043	Extractive low. Ash low.
3.42	2.30	1.12	9.47	15.20	16.97	" " ..	49044	Genuine.
4.10	2.88	1.22	9.52	17.50	19.34	" " ..	49045	"
3.76	2.10	1.66	9.67	15.00	16.60	" " ..	49046	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cts.	Manufacturer.	Furnisher.	

DISTRICT OF OTTAWA—

1911								
Oct. 25	Ground Ginger.	49047	A. Moreland, Bank st., Ottawa.	$\frac{1}{4}$ lb...	10	C. H. Cochrane & Co., Ottawa.		
" 25	"	49048	A. E. Rea & Co., Ltd., Ottawa.	$\frac{1}{4}$ " ..	10	Heron & Leblanc, Montreal.		
" 25	"	49049	P. Lamoureux & Cie., Dalhousie st., Ottawa.	$\frac{1}{4}$ " ..	10	Unknown.....	Provost & Allard, Ottawa.	
" 26	"	49050	F. A. Scott & Son., Wellington st., Ottawa	$\frac{1}{4}$ " ..	10	McLarens Ltd., Toronto.		

DISTRICT OF KINGSTON—

Nov. 1	Ground ginger.	48574	C. Saunders, Kingston.	$\frac{1}{4}$ lb...	10	Gorman Eckert, London.		
" 1	"	48575	Anderson Bros., Kingston.	$\frac{1}{4}$ " ..	10	Unknown. ..		
" 1	"	48576	D. Couper, Kingston.	$\frac{1}{4}$ " ..	10	Pure Gold Co., Toronto.		
" 1	"	48577	Kelley Bros., Kingston.	$\frac{1}{4}$ " ..	15	"		
" 2	"	48578	D. B. Gage, Kingston.	$\frac{1}{4}$ " ..	10	Unknown.....		
" 2	"	48579	J. T. Morris, Kingston.	$\frac{1}{4}$ " ..	7	Dalton Bros., Toronto.		
" 2	"	48580	G. A. Vallean, Kingston.	$\frac{1}{4}$ " ..	10		Robertson Nicolle Co., Kingston.	
" 2	"	48581	J. McCulla, Kingston.	$\frac{1}{4}$ " ..	10	Pure Gold Co., Toronto.		
" 2	"	48582	J. R. B. Gage, Kingston.	$\frac{1}{4}$ " ..	10		Fewick Hendry Co., Kingston.	
" 2	"	48583	J. Redden, Kingston.	$\frac{1}{4}$ " ..	10	Todhunter & Mitchell, Toronto.		

DISTRICT OF TORONTO—

Oct. 16	Ground ginger.	47385	J. & R. Williams, Murray St., Hamilton.	$\frac{1}{4}$ lb...	10		R. Simpson & Co. Hamilton.	
" 18	"	47386	R. J. Hewson, Main St., Hamilton.	$\frac{1}{4}$ " ..	10		Unknown ..	
" 20	"	47387	M. Weis, 341 Parliament St. Toronto.	$\frac{1}{4}$ " ..	10		"	



SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Ash.			Moisture.	Cold water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry ginger.			

J. A. RICKEY, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
4.32	2.56	1.76	9.82	15.20	16.87	Ginger starch and tissues	49047	Genuine.
2.60	1.28	1.32	9.20	13.50	14.86	" " ..	49048	Extractive and ash low.
5.00	2.80	2.20	9.50	15.60	17.23	" " ..	49049	Genuine.
4.10	2.10	2.00	8.72	16.00	17.52	" " ..	49050	"

JAS. HOGAN, INSPECTOR.

3.56	2.44	1.12	9.12	17.30	19.03	Ginger starch and tissues.	48574	Genuine.
4.68	2.40	2.28	9.27	15.70	17.30	" " ..	48575	"
4.26	2.10	2.16	10.12	16.50	18.39	" " ..	48576	"
3.80	2.50	1.30	9.67	16.40	18.15	" " ..	48577	"
4.94	3.52	1.42	9.27	16.60	18.28	" " ..	48578	"
4.40	1.96	2.44	9.57	15.80	17.47	" " ..	48579	"
2.34	1.10	1.24	9.80	10.60	11.75	" " ..	48580	Extractive low. Ash low.
5.66	2.96	2.70	9.50	14.10	15.55	" " ..	48581	Genuine.
3.60	2.05	1.55	9.85	15.90	17.63	" " ..	48582	"
3.48	2.00	1.48	10.90	15.50	17.39	" " ..	48583	"

H. J. DAGER, INSPECTOR.

2.06	1.17	0.89	9.60	9.70	10.73	Ginger starch and tissues and maize starch.	47385	Adulterated.
4.76	1.60	3.16	9.87	12.02	13.33	Ginger starch and tissues	47386	Extractive low.
2.30	1.21	1.09	9.60	10.20	11.29	Ginger starch and tissues and maize starch.	47387	Adulterated.



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion.)
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF TORONTO—

1911.								
Oct.	20	Ground Ginger.	47388 W. J. Street, 291½ Parliament St. Toronto.	¼ lb..	8	.....	The White Swan Cereals Co., Ltd., Toronto.	.....
"	23	" ..	47389 M. Robinson & Son, Orangeville.	¼ " ..	10	.....	Unknown ..	.....
"	24	" ..	47390 Lloyd Bros., Owen Sound.	¼ " ..	10	.....	" ..	.....
"	26	" ..	47391 Secord Bros., Meaford.	¼ " ..	10	.....	McLauchlan Sons & Co., Owen Sound	.....
"	26	" ..	47392 J. Mitchell, Collingwood.	¼ " ..	10	.....	Young Windfield, Ltd. Hamilton.	.....
Nov.	2	" ..	47393 R. J. Goldring, Whitby.	¼ " ..	10	.....	Eby Blain & Co., Ltd., Toronto.	.....
"	2	" ..	47394 J. D. Carroeth, Oshawa.	¼ " ..	10	.....	J. M. Lowes & Co., Toronto.	.....

DISTRICT OF WINDSOR—

Oct.	17	Ground ginger.	47817 Orendorf Bros., Ridgetown.	3 pgs.	30	I. X. L. Spice & Coffee Co., London.	...	Labelled 'Sweetheart pure ginger.
"	18	" ..	47826 B. C. Watson, Leamington.	6 oz..	15	Hamilton Spice & Coffee Co., Hamilton.	.....	.....
"	18	" ..	47827 J. Vandour & Son, Leamington.	6 " ..	15	Unknown.....	.....	.....
"	18	" ..	47830 B. & W. McIntyre, Leamington.	6 " ..	15	" ..	.....	.....
"	18	" ..	47832 Geo. M. Sawyer, Leamington.	6 " ..	15	" ..	.....	.....
"	18	" ..	47836 Robinson Bros., Leamington.	6 " ..	15	Todhunter & Mitchell, Toronto.	.....	.....
"	19	" ..	47840 A. Raines, Essex	6 " ..	15	McLaren's Hamilton.	.....	.....
"	19	" ..	47842 O. H. Bricker, Essex	6 " ..	15	J. F. Dalley, Hamilton.	.....	.....
"	19	" ..	47844 A. Detwiler, Essex.	4 " ..	10	.....	J. F. Smyth & Co., Windsor.	.....
"	19	" ..	47846 A. H. Scarff, Essex.	6 " ..	15	Todhunter & Mitchell, Toronto.	.....	.....



SESSIONAL PAPER No. 14

GROUND GINGER

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Ash.			Moisture.	Cold water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry Ginger.			

H. J. DAGER, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.			
3·62	2·30	1·32	9·50	14·60	16·13	Ginger starch and tissues	47388	Genuine.
3·54	1·60	1·94	9·50	10·40	11·49	" "	47389	Extractive low.
3·24	2·26	0·98	9·17	17·50	19·28	" "	47390	Genuine.
3·56	1·46	2·10	9·40	9·45	10·43	" "	47391	Extractive low.
5·00	2·20	2·80	9·52	15·00	16·58	" "	47392	Genuine.
3·90	2·00	1·90	9·75	13·87	15·35	" "	47393	"
5·56	2·76	2·80	8·97	15·00	16·47	" "	47394	"

JNO. TALBOT, INSPECTOR.

6·04	3·24	2·80	10·55	17·00	19·00	Ginger starch and tissues	47817	Genuine.
2·66	0·90	1·76	8·55	16·70	18·25	" "	47826	Genuine. Ash low.
5·08	2·50	2·58	9·40	15·70	17·33	" "	47827	"
4·32	2·88	1·44	9·25	16·50	18·18	" "	47830	"
4·53	2·27	2·36	9·60	14·70	16·26	" "	47832	"
4·14	3·54	0·60	8·80	17·20	18·85	" "	47836	"
4·00	2·56	1·44	9·62	15·20	16·81	" "	47840	"
4·70	3·30	1·40	9·40	14·00	15·45	" "	47842	"
5·20	2·00	3·20	9·65	14·20	15·71	" "	47844	"
3·50	2·08	1·42	9·65	17·30	19·14	" "	47846	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1911.								
Oct. 23	Ground Ginger.	47438	Blue Ribbon, Ltd., Winnipeg.	$\frac{1}{4}$ lb..	10	Vendors .....		Blue Ribbon "Brand."
" 23	" ..	47439	Campbell Bros. Wilson, Winnipeg.	$\frac{1}{4}$ " .	nil.	" .....		Royal Shield "
" 23	" ..	47440	The Gold Standard Mfg. Co., Winnipeg.	$\frac{1}{4}$ " .	"	" .....		Gold Standard "
" 24	" ..	47441	The White Star Mfg. Co., Winnipeg.	$\frac{1}{4}$ " .	"	" .....		White Star "
" 24	" ..	47442	The Dyson Co., Winnipeg.	$\frac{1}{4}$ " .	"	" .....		Red Cross "
" 25	" ..	47443	Mikush & Bierbaumer, Winnipeg.	$\frac{1}{2}$ " .	10	The Dyson Co., Winnipeg.	Unknown ..	" "
" 25	" ..	47444	Moffett & Douglas, Winnipeg	$\frac{1}{2}$ " .	10	The Pure Gold Mfg. Co., Ltd., Toronto	" ..	Regal (Pure Ginger.)
" 25	" ..	47445	Western Mercantile Co., Winnipeg.	$\frac{1}{2}$ " .	10	Blue Ribbon Co., Winnipeg.	.....	Blue Ribbon "Brand."
" 25	" ..	47446	A. J. Kemball, Winnipeg.	$\frac{1}{2}$ " .	15	Gorman Eckert & Co., Ltd., London and Winnipeg.	.....	Forest City "
" 26	" ..	47447	W. H. Wright, Winnipeg.	$\frac{1}{2}$ " .	20	Foley Bros., Larson Co., Winnipeg.	Unknown ..	Premier (Pure.)

DISTRICT OF CALGARY—

Nov. 8	Ground ginger.	44041	LePage Bros., Medicine Hat.	3 pgs.	30	Gold Standard Mfg. Co., Winnipeg.	.....	
" 8	" ..	44042	L. B. Cochran, Medicine Hat.	$\frac{1}{4}$ lb .	10	" .....		
" 9	" ..	44043	H. W. Ireland & Co., Medicine Hat.	3 pgs.	30	" .....		
" 9	" ..	44044	Spencer & Todd, Medicine Hat.	3 " .	30	Balfour, Smye & Co., Hamilton.	.....	
" 9	" ..	44045	Hewitt & Armstrong, Medicine Hat.	$\frac{1}{4}$ lb .	10	Medicine Hat Grocery Co., Medicine Hat	.....	
" 15	" ..	44046	L. T. Mewburn & Co., Ltd., Calgary.	3 tins.	20	Imperial Cocoa and Spice Co., Hamilton.	.....	
" 15	" ..	44047	Georgeson & Co., Ltd., Calgary.	3 " .	25	Vendors .....		



SESSIONAL PAPER No. 14

GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Ash.			Moisture.	Cold water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry Ginger.			

A. C. LARIVIERE, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
4.00	2.68	1.32	8.37	15.40	16.80	Ginger, Starch and tissues	47438	Genuine.
7.40	2.44	4.96	1.25	17.00	17.31	" ..	47439	Genuine, but very dry. Ash high.
4.68	1.94	2.74	8.37	14.60	15.93	" ..	47440	Genuine.
3.44	2.34	1.10	7.80	18.40	19.95	" ..	47441	"
2.20	1.40	0.80	7.15	17.70	19.06	" ..	47442	" Ash low.
3.80	1.80	2.00	5.70	14.80	15.70	" ..	47443	"
3.68	2.40	1.28	8.80	17.50	19.18	" ..	47444	"
3.90	2.50	1.40	8.27	17.70	19.20	" ..	47445	"
3.64	1.84	1.80	9.00	14.20	15.60	" ..	47446	"
3.30	1.80	1.50	8.72	15.80	17.30	" ..	47447	"

R. W. FLETCHER, INSPECTOR.

5.88	1.96	3.92	9.57	14.60	16.14	Ginger starch and tissues.	44041	Genuine.
5.06	2.34	2.72	9.30	15.10	16.15	" ..	44042	"
4.46	1.88	2.58	9.75	14.00	15.51	" ..	44043	"
5.17	2.21	2.96	10.75	13.20	14.77	" ..	44044	Extractive low.
4.28	1.90	2.38	9.25	14.30	15.70	" ..	44045	Genuine.
5.40	4.20	1.20	8.75	16.90	18.52	" ..	44046	"
5.30	2.00	3.30	8.75	14.20	15.56	" ..	44047	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF CALGARY—

1911.								
Oct.	15	Ground Ginger.	44048 G. F. and J. Galt, Calgary.	3 tins.	30	Blue Ribbon Mfg. Co., Ltd., Winnipeg.		
"	15	"	44049 Campbell, Wilson & Horne, Calgary.	3 "	30	Campbell Wilson, Ltd., Winnipeg.		
"	15	"	44050 Georgeson & Co., Ltd., Calgary.	3 "	30	Vendors		

DISTRICT OF NELSON—

Oct.	19	Ground ginger.	48427 Crow's Nest Trading Co., Fernie.	$\frac{1}{4}$ lb.	10	Dalton Bros., Toronto.		
"	19	"	48428 " "	$\frac{1}{4}$ "	10	White Star Mfg. Co., Winnipeg.		
"	19	"	48435 Trites Wood Co., Fernie.	$\frac{1}{4}$ "	10	Gold Standard Mfg. Co., Winnipeg.		
"	19	"	48439 Fernie Co-op. Store, Fernie.	$\frac{1}{4}$ "	5	W. Braid, Vancouver.		
"	19	"	48440 " "	$\frac{1}{4}$ "	10	Georgeson & Co., Calgary.		
"	27	"	48450 W. R. Braden & Son, Rossland.	$\frac{1}{4}$ "	10	Kelly, Douglas & Co., Vancouver.		
"	27	"	48452 Union Co-op. Assn., Rossland	$\frac{1}{4}$ "	10	Georgeson & Co., Calgary.		
"	27	"	48463 Hunter Bros., Rossland.	1 tin.	15	Empress Mfg. Co., Vancouver.		
"	27	"	48464 " "	$\frac{1}{4}$ "	5			
"	27	"	48481 A. S. Horswill, Nelson.	$\frac{1}{4}$ "	10	Oriental Mills, Vancouver.		

DISTRICT OF VANCOUVER—

Oct.	27	Ground Ginger.	38255 London Grocery Co., City Branch, Vancouver.	$\frac{1}{4}$ lb.	10		Kelly Douglas, Vancouver.	
"	27	"	38256 Walford & Roney Granville St., Vancouver.	$\frac{1}{4}$ "	10	Empress Mfg. Co., Vancouver.		
"	27	"	38257 J. F. May, Granville St., Vancouver.	$\frac{1}{4}$ "	15	W. Braid & Co. Vancouver.		Guaranteed absolutely pure.
"	27	"	38258 City Grocery, Davie St., Vancouver.	$\frac{1}{4}$ "	10			



SESSIONAL PAPER No. 14

GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
Ash.			Moisture.	Cold Water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry ginger.			

R. W. FLETCHER, INSPECTOR—*Concluded.*

p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	Ginger starch and tissues	44048	Genuine.
4.02	2.90	1.12	9.62	17.10	18.87			
7.98	2.80	5.18	10.17	14.60	16.28			" Ash high.
5.52	2.04	3.48	9.15	14.00	15.40			"

THOS. PARKER, INSPECTOR.

2.26	1.34	0.92	10.25	17.00	18.94	Ginger starch and tissues.	48427	Genuine. Ash low.
7.70	2.60	5.10	9.75	16.00	17.12	" ..	48428	" Ash high.
7.14	2.66	4.48	8.77	14.80	16.22	" ..	48435	" "
6.68	3.74	2.94	10.50	16.00	17.87	" ..	48439	"
5.44	2.94	2.50	10.10	15.40	17.13	" ..	48440	"
4.58	2.20	2.38	7.00	15.80	16.98	" ..	48450	"
6.72	2.08	4.64	9.62	15.40	17.03	" ..	48452	"
4.14	2.12	2.02	8.80	17.00	18.64	" ..	48463	"
5.76	2.64	3.12	9.27	14.70	16.20	" ..	48464	"
6.20	3.36	2.94	9.90	12.52	13.88	" ..	48481	Extractive low.

J. F. POWER, INSPECTOR.

3.76	2.24	1.52	8.35	15.70	17.13	Ginger starch and tissues	38255	Genuine.
6.20	2.10	4.10	8.30	14.70	16.03	" ..	38256	"
5.28	2.20	3.08	7.90	15.60	16.93	" ..	38257	"
5.14	1.40	3.74	7.00	14.40	15.48	" ..	38258	"



Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1911	Ground Ginger.							
Oct. 27	"	38259	Vancouver Grocery, Granville St., Vancouver	$\frac{1}{4}$ lb.	10	Oriental Mills, Vancouver.		
" 31	"	38260	Elgett's Grocery, Hastings St., Vancouver.	$\frac{1}{4}$ "	10	Empress M'f'g. Co., Vancouver.		
" 31	"	38261	Woodward's Dept. Stores, Ltd., Hastings St., Vancouver	$\frac{1}{4}$ "	10	Wm. Braid & Co., Vancouver.		
" 31	"	38262	Dom. Grocery, Abbott St., Vancouver.	$\frac{1}{4}$ "	10		Kelly Douglas, Vancouver.	"Columbia" Brand.
" 31	"	38263	Foran Bros., Carral St., Vancouver.	$\frac{1}{4}$ "	10	Unknown.		
" 31	"	38264	F. Filion, Carral St., Vancouver	$\frac{1}{4}$ "	10	Empress M'f'g. Co., Vancouver.		

DISTRICT OF VICTORIA—

Oct. 25	Ground Ginger.	47651	Windsor Grocery Co., Victoria.	$\frac{1}{4}$ lb.	10	Pioneer Coffee and Spice Mills, Ltd., Victoria, B.C.		Extra quality ginger.
" 25	"	47652	The West End Grocery Co., Ltd., Victoria.	$\frac{1}{4}$ "	10	Todhunter Mitchell & Co., Toronto, Ont		
Nov. 9	"	47653	Copas & Young, Victoria.	$\frac{1}{4}$ "	10		W. H. Malkin & Co., Vancouver, B.C.	
" 9	"	47654	Wm. B. Hall, Victoria.	$\frac{1}{4}$ "	10	Pioneer Coffee and Spice Mills, Victoria, B.C.		
" 13	"	47655	Erskine & Co., Victoria.	$\frac{1}{4}$ "	15	Victoria Coffee and Spice Mills, Victoria, B.C.		
" 13	"	47656	F. E. Plummer, Victoria.	$\frac{1}{4}$ "	10		R. P. Rithet & Co., Victoria, B.C.	
" 15	"	47657	D. H. Ross & Co., Victoria.	$\frac{1}{4}$ "	10	Empress M'f'g. Co., Vancouver, B.C.		
" 15	"	47658	Harrison & McDonald, Victoria.	$\frac{1}{4}$ "	10	"		
" 16	"	47659	E. G. Bailey, Victoria.	$\frac{1}{4}$ "	10	"		
" 16	"	47660	Acton Bros., Victoria.	$\frac{1}{4}$ "	10	W. A. Jameson Coffee Co., Victoria, B.C.		



## SESSIONAL PAPER No. 14

## GROUND GINGER.

RESULTS OF ANALYSIS.						Microscopical Examination.	No. of Sample.	Remarks and opinion of the Chief Analyst.
Ash.			Moisture.	Cold water Extractive.				
Total.	Water soluble.	Insoluble in water.		Normal.	Calculated to dry Ginger.			

J. F. POWER, INSPECTOR—*Concluded.*

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.			
7·14	3·06	3·08	8·17	16·10	17·52	Ginger starch and tissues	38259	Genuine. Ash high.
4·84	2·36	2·48	7·25	16·30	17·57	" ..	38260	"
4·16	2·00	2·16	6·25	14·50	15·46	" ..	38261	"
4·76	2·08	2·68	7·12	14·50	16·49	" ..	38262	"
4·94	2·54	2·40	7·75	15·10	16·37	" ..	38263	"
4·40	2·80	1·60	7·40	16·60	17·92	" ..	38264	"

## D. O'SULLIVAN, INSPECTOR.

3·60	2·42	1·18	7·45	16·20	17·50	Ginger starch and tissues	47651	Genuine.
5·24	2·30	2·94	7·92	14·20	15·42	" ..	47652	"
6·83	2·62	4·21	7·27	16·70	18·00	" ..	47653	"
3·58	2·04	1·54	7·62	16·00	17·31	" ..	47654	"
7·44	2·10	5·54	7·10	16·00	17·22	" ..	47655	" Ash high.
3·42	1·94	1·48	7·50	16·00	17·29	" ..	47656	"
6·04	2·88	3·16	7·05	15·00	16·13	" ..	47657	"
7·66	4·46	3·20	8·95	17·20	18·89	" ..	47658	" Ash high.
5·26	2·30	2·96	7·22	16·30	17·55	" ..	47659	"
5·44	2·30	3·14	6·52	14·30	15·29	" ..	47660	"











